

ບົດລາຍງານສະຖານະພາບຜະດຸງຄັນ ປີ 2014

THE STATE OF THE WORLD'S MIDWIFERY 2014

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ເສັ້ນທາງເດີນສຳລັບທຸກຄົນ

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ສິດທິຂອງແມ່ຍິງຕໍ່ສຸຂະພາບຂອງຕົນ

A WOMAN'S RIGHT

TO HEALTH



ສຸຂະພາບຈະເລີນພັນ



ການຖືພາ



ການເກີດລູກ



ການດູແລຫຼັງເກີດ

# ບົດສະຫຼຸບຫຍໍ້

## Executive Summary

ສະຖານະພາບຜະດຸງຄັນຂອງໂລກ (SoWMy) 2014: ເສັ້ນທາງເດີນສຳລັບທຸກຄົນ. ສິດທິຂອງແມ່ຍິງຕໍ່ສຸຂະພາບຂອງຕົນ ໄດ້ນຳແຮງບັນດານໃຈຈາກ ການລິເລີ່ມຕໍ່ແມ່ຍິງ ແລະ ເດັກທຸກຄົນ ຂອງເລຂາທິການໃຫຍ່ຂອງອົງການ ສະຫະປະຊາຊາດ (ສປຊ) ແລະ ການຮຽກຮ້ອງຕໍ່ການຈັດຕັ້ງປະຕິບັດໃນ ເດືອນກັນຍາ ປີ 2013 ທີ່ຜ່ານມານີ້ ແມ່ນການ ເຮັດທຸກສິ່ງທຸກຢ່າງເພື່ອໃຫ້ບັນລຸເປົ້າໝາຍສະຫະສະວັດ (MDGs) ໃນປີ 2015 ແລະ ສືບຕໍ່ດຳເນີນວຽກງານການພັດທະນາ ແລະ ການຮັບຮອງແຜນການຫຼັງຈາກປີ 2015 ໂດຍສອດຄ່ອງກັບກົດລະບຽບຂອງສາກົນ.

ຈຸດປະສົງຫຼັກຂອງ SowMy 2014 ທີ່ໄດ້ຕົກລົງກັນໃນກອງປະຊຸມ ຜະດຸງຄັນສາກົນຄັ້ງທີ 2, ຈັດຂຶ້ນເມື່ອເດືອນພຶດສະພາ ປີ 2013 ທີ່ ນະຄອນຫຼວງ ຄົວລາລຳເບີ, ປະເທດມະເລເຊຍ ກໍ່ແມ່ນເພື່ອໃຫ້ມີ ຫຼັກຖານອ້າງກ່ຽວກັບສະຖານະພາບຜະດຸງຄັນ ໃນປີ 2014 ຊຶ່ງຈະ ເປັນການສົ່ງເສີມການສົນທະນາປົກກະຕິສາທາລະນະ ລັດຖະບານ ແລະ ຄູ່ຮ່ວມມືກ່ຽວກັບນະໂຍບາຍ, ເລັ່ງໃສ່ໃຫ້ມີຄວາມຄືບໜ້າຢ່າງ ໄວວາເພື່ອບັນລຸເປົ້າໝາຍດ້ານສຸຂະພາບ, ກຳນົດການພັດທະນາໃນ 3 ປີ ຕັ້ງແຕ່ SowMy 2011 ໄດ້ພິມອອກ ແລະ ແຈ້ງການເຈລະຈາ ແລະ ການກະກຽມວາລະແຜນພັດທະນາຫຼັງຈາກປີ 2015.

SoWMy 2014 ແມ່ນແນໃສ່ 73 ປະເທດ ໃນ 75 ປະເທດ ທີ່ມີ ລາຍຮັບຕໍ່າ ແລະ ປານກາງ ແລະ ຖືກລວມຢູ່ໃນບົດລາຍງານ ນັບ ຖອຍຫຼັງສູ່ປີ 2015 (Countdown to 2015). ການຕາຍຂອງ ແມ່ ແລະ ເດັກ ແລະ ລູກຕາຍໃນທ້ອງທີ່ມີຫຼາຍກວ່າ 92 ເປີເຊັນ ໃນທົ່ວໂລກ ແມ່ນເກີດຂຶ້ນຢູ່ບັນດາ 73 ປະເທດນີ້. ແຕ່ເວລາເບິ່ງບຸກ ຄະລາກອນດ້ານການຢາ, ຜະດຸງຄັນ ແລະ ແພດໃນປະເທດເຫຼົ່ານີ້ ເຫັນວ່າ ມີພຽງ 42 ເປີເຊັນ ເທົ່ານັ້ນທີ່ມີສະໜອງບໍລິການໃຫ້ແມ່ ແລະ ເດັກເກີດໃໝ່ໄດ້.

ຜະດຸງຄັນເປັນພາກສ່ວນອັນສຳຄັນ ໃນການດູແລສຸຂະພາບທາງ ເພດ ແລະ ສຸຂະພາບຈະເລີນພັນ, ສຸຂະພາບຂອງແມ່ ແລະ ເດັກ (SRMNH) ຊຶ່ງໄດ້ຖືກກຳນົດໄວ້ໃນບົດລາຍງານສະບັບນີ້ວ່າ ເປັນ ການບໍລິການດູແລສຸຂະພາບ ແລະ ເປັນກຳລັງແຮງງານໃນຂະແໜງ ສຸຂະພາບ ໂດຍສະເພາະແມ່ນ ການຖືພາ, ການເກີດລູກ ແລະ ການ ດູແລຫຼັງເກີດ. ອັນນີ້ເຮັດໃຫ້ເຫັນວ່າວຽກງານຜະດຸງຄັນແມ່ນມີ ຄວາມຫຼາກຫຼາຍ ແລະ ກໍ່ໄດ້ນຳໃຊ້ໂດຍພະນັກງານດູແລສຸຂະພາບ ຂອງຫຼາຍຂະແໜງການ.



ຜະດຸງຄັນຕ້ອງໄດ້ຮັບການຝຶກອົບຮົມຕາມມາດຕະຖານສາກົນ ເພື່ອສາ ມາດສະໜອງການດູແລສຸຂະພາບຂອງແມ່ ແລະ ເດັກຢ່າງມີປະສິດທິພາບ

(ຮູບຖ່າຍໂດຍ: Michael Perier)



**ຜະດຸງຄັນແມ່ນອົງປະກອບ  
ສໍາຄັນຂອງການດູແລ  
ສຸຂະພາບທາງເພດ ແລະ  
ສຸຂະພາບຈະເລີນພັນ,  
ສຸຂະພາບແມ່ ແລະ  
ເດັກເກີດໃໝ່**



SoWMy 2014 ແມ່ນປະສານງານໂດຍ ອົງການ ສປຊ ກອງທຶນ ສໍາລັບປະຊາກອນ, ສະຫະພັນຜະດຸງຄັນສາກົນ ແລະ ອົງການອະນາໄມໂລກ ໃນນາມຂອງຜູ້ຕາງໜ້າລັດຖະບານ ແລະ ພາກສ່ວນກ່ຽວຂ້ອງໃນ 73 ປະເທດ ແລະ ຄູ່ຮ່ວມພັດທະນາໃນທົ່ວໂລກທັງ 30 ພາກສ່ວນ.

ຫຼັກຖານ ແລະ ວິເຄາະ ໃນ SoWMy 2014 ແມ່ນປະກອບດ້ວຍ 4 ຂົງເຂດຫຼັກ ທີ່ສາມາດຕັດສິນວ່າ ລະບົບ ແລະ ພະນັກງານສາທາລະນະສຸກໄດ້ສະໜອງການບໍລິການທີ່ມີຄຸນນະພາບຫຼືບໍ່, ແມ່ຍິງໄດ້ຮັບການດູແລທີ່ກ່ຽວພັນເຖິງ (SRMNH) ທີ່ເຂົາເຈົ້າຕ້ອງການຫຼືບໍ່. ທັງ 4 ຂົງເຂດຫຼັກດັ່ງກ່າວລວມມີ: ການສະໜອງພະນັກງານ, ການເຂົ້າເຖິງ, ຄວາມພໍໃຈ ແລະ ຄຸນນະພາບ.

**ການສະໜອງພະນັກງານ:** SoWMy 2014 ສະໜອງການປະເມີນຄວາມສໍາຄັນຂອງການບໍລິການດ້ານ SRMNH ທີ່ແມ່ ແລະ ເດັກເກີດໃໝ່ມີຄວາມຕ້ອງການທີ່ສຸດ. ໃນແຕ່ລະປະເທດ ຄວາມຕ້ອງການຕໍ່ການບໍລິການເຫຼົ່ານີ້ສາມາດປ່ຽນເປັນຄວາມຕ້ອງການຕໍ່ພະນັກງານຜະດຸງຄັນ.



ແມ່ຍິງທຸກຄົນຄວນໄດ້ເຂົ້າເຖິງການບໍລິການດູແລກ່ອນເກີດຢ່າງຕໍ່າ 4 ຄັ້ງ ໃນໄລຍະຖືພາ

(ຮູບຖ່າຍໂດຍ: Michael Perier)

**ການເຂົ້າເຖິງ:** ເຖິງວ່າເກືອບທັງໝົດ 73 ປະເທດ ຮັບຮູ້ເຖິງຄວາມສໍາຄັນຂອງການເຂົ້າເຖິງທີ່ຕ້ອງມີເງິນ ແລະ ມີນະໂຍບາຍໃນການສະເໜີບາງອົງປະກອບຂອງການບໍລິການ SRMNH ແບບບໍ່ເສຍຄ່າໃນການເຂົ້າເຖິງ, ແຕ່ມີພຽງ 4 ປະເທດເທົ່ານັ້ນທີ່ສະໜອງຊຸດຮັບປະກັນຜົນປະໂຫຍດຢ່າງຕໍ່າສຸດ ໃນການບໍລິການ SRMNH ລວມເຖິງການປະຕິບັດທີ່ສໍາຄັນ.

**ຄວາມເພິ່ງພໍໃຈ:** ຫຼາຍໆປະເທດມີນະໂຍບາຍໄວ້ເພື່ອສະໜອງການບໍລິການດູແລ SRMNH ທີ່ຮັບຮູ້ສະພາບຂອງສັງຄົມ ແລະ ວັດທະນະທໍາ. ເຖິງຢ່າງໃດກໍ່ຕາມ, ຂໍ້ມູນຂອງແມ່ຍິງທີ່ມີຄວາມເຂົ້າໃຈຕໍ່ການດູແລຂອງຜະດຸງຄັນແມ່ນຍັງບໍ່ພຽງພໍ, ແລະ ປະເທດຕ່າງໆ ກໍ່ຮັບຮູ້ເຖິງຄວາມຕ້ອງການໃນການຄົ້ນຄວ້າບັນຫາດັ່ງກ່າວໃຫ້ເຂັ້ມ

ງວດຂຶ້ນຕື່ມ. ຜູ້ສະໜັບສະໜຸນກອງປະຊຸມບົດລາຍງານ SoWMy 2014 ໄດ້ກ່າວວ່າ ບັນຫາຂອງຄວາມເພິ່ງພໍໃຈແມ່ນມີຄວາມກ່ຽວພັນຢ່າງແໜ້ນແຟ້ນຕໍ່ການຈໍາແນກ ແລະ ສະຖານະພາບຂອງແມ່ຍິງ ໂດຍທົ່ວໄປ ທັງຜູ້ຊົມໃຊ້ບໍລິການ ແລະ ພະນັກງານສາທາລະນະສຸກ.

**ຄຸນນະພາບ** ຂອງຜູ້ສະໜອງ ແລະ ຜູ້ຮັບການດູແລສາມາດເພີ່ມຂຶ້ນໄດ້ໂດຍການປັບປຸງຄຸນນະພາບຂອງການສຶກສາ, ກົດລະບຽບ ແລະ ບົດບາດຂອງສະມາຄົມວິຊາຊີບຂອງຜະດຸງຄັນ. SoWMy 2014 ຊີ້ໃຫ້ເຫັນວ່າ ຫຼັກສູດຜະດຸງຄັນໃນຫຼາຍເທດແມ່ນເໝາະສົມ ແລະ ມີການປັບປຸງໃໝ່, ແຕ່ໂຄງສ້າງພື້ນຖານດ້ານການສຶກສາ, ລະບົບ ແລະ ແຫຼ່ງຂໍ້ມູນ, ໂດຍສະເພາະແມ່ນໂຄງການອົບຮົມຜະດຸງຄັນ ໂດຍກົງ ແມ່ນຍັງມີຊ່ອງວ່າງຫຼາຍ.

ການຄຸ້ມຄອງທີ່ມີປະສິດທິຜົນຕໍ່ການວັດແທກການມີສະໜອງໃຫ້ ແລະ ການເຂົ້າເຖິງ ແມ່ນຍັງມີຊ່ອງວ່າງຢ່າງຫຼວງຫຼາຍ. ການຫຼຸດຜ່ອນຊ່ອງວ່າງເຫຼົ່ານີ້ ແມ່ນຕ້ອງການເກັບກໍາ ແລະ ນໍາໃຊ້ຂໍ້ມູນ ແລະ ຄວາມເປັນຜູ້ນໍາຂອງພະນັກງານ ເພື່ອໃຫ້ບຸລິມະສິດດ້ານຜະດຸງຄັນ ແລະ ຜົນແຜ່ແຫຼ່ງຂໍ້ມູນ ເພື່ອສະໜັບສະໜຸນພະນັກງານ ແລະ ການວາງແຜນການບໍລິການ. 10 ຂໍ້ມູນທີ່ຈໍາເປັນຕ້ອງມີໃນການວາງແຜນຂອງພະນັກງານສາທາລະນະສຸກມີຄື: ຈໍານວນ, ເປີເຊັນຂອງເວລາໃນການບໍລິການດ້ານ SRMNH, ພາລະບົດບາດ, ເກນອາຍຸ, ອາຍຸບໍານານ, ໄລຍະເວລາການສຶກສາ, ການລົງທະບຽນຮຽນ, ການຕົກລົ້ນ ແລະ ການຈົບຈາກການສຶກສາ ແລະ ການອອກແບບສະໝັກໃຈ.

**ຜະດຸງຄັນ ປີ 2030:** ການບໍລິການດູແລດ້ານຜະດຸງຄັນເປັນຈຸດໃຈກາງໃນການບັນລຸບຸລິມະສິດຂອງຊາດ ກໍ່ຄືທົ່ວໂລກ ແລະ ການປ້ອງກັນສິດທິຂອງແມ່ຍິງ ແລະ ເດັກເກີດໃໝ່. SoWMy 2014 ໄດ້ສ້າງຄູ່ມືຜະດຸງຄັນ 2030 ເພື່ອເປັນທິດທາງໃນການວາງແຜນ ແລະ ກໍານົດນະໂຍບາຍ. ໂດຍເລີ່ມຈາກຫຼັກຖານທີ່ວ່າ ແມ່ຍິງຖືກພາຈະມີສຸຂະພາບແຂງແຮງ ເວັ້ນເສຍແຕ່ມີອາການສິນ ຫຼື ມີສັນຍານເຕືອນອາການສິນ, ການເກີດອາການສິນ ແລະ ມີຜະດຸງຄັນສະໜອງການດູແລທີ່ດີພ້ອມກັບການດູແລສຸກເສີນເມື່ອມີຄວາມຕ້ອງການ, ມັນເປັນການສົ່ງເສີມຮູບແບບການດູແລທີ່ແມ່ຍິງເປັນຈຸດໃຈກາງຂອງຜະດຸງຄັນໃນການດູແລ, ຊຶ່ງສະແດງໃຫ້ເຫັນເຖິງການໄດ້ຮັບຜົນປະໂຫຍດທີ່ດີກວ່າ ແລະ ການປະຢັດຄ່າໃຊ້ຈ່າຍໄດ້ຫຼາຍກວ່າຮູບແບບການດູແລແບບປີ້ນປົວ.



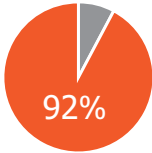
ການບໍລິການດູແລແມ່ ແລະ ເດັກເກີດໃໝ່ຂອງຜະດຸງຄັນທີ່ມີຄຸນນະພາບສູງສາມາດຊ່ວຍຊີວິດແມ່ ແລະ ເດັກໄດ້ ແລະ ຍັງເຮັດໃຫ້ຄອບຄົວມີສຸຂະພາບດີ

(ຮູບຖ່າຍໂດຍ: Michael Perier)



**ບົດລາຍງານນີ້ສະແດງໃຫ້ເຫັນວ່າ:**

**1** ໃນບັນດາ 73 ປະເທດນັບຖອຍຫຼັງ ລວມຢູ່ໃນບັນຊີ ບົດລາຍງານທີ່ມີອັດຕາການຕາຍຂອງແມ່ ແລະ ເດັກ ແລະ ລູກຕາຍໃນທ້ອງຫຼາຍກວ່າ 92 ເປີເຊັນ, ແຕ່ມີ ບຸກຄະລາກອນດ້ານການແພດ, ຜະດຸງຄັນ ແລະ ການ ຢາພຽງ 42 ເປີເຊັນ ເທົ່ານັ້ນ. ໃນບັນດາປະເທດເຫຼົ່ານີ້, ການຂາດດຸນຂອງພະນັກງານຜະດຸງຄັນແມ່ນເປັນ ສິ່ງທີ່ຕ້ອງໄດ້ຮັບການແກ້ໄຂຢ່າງຮີບດ່ວນທີ່ສຸດໃນເຂດ ທີ່ມີອັດຕາການຕາຍຂອງແມ່ ແລະ ເດັກເກີດ ໃໝ່ສູງທີ່ສຸດ.

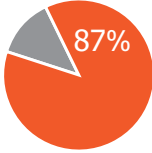


**2** ໃນບັນດາ 73 ປະເທດນັ້ນ ມີພຽງ 4 ປະເທດເທົ່ານັ້ນ ທີ່ສາມາດສະໜອງຕໍ່ຄວາມຕ້ອງການໄດ້ຢ່າງທົ່ວເຖິງ ໃນການປະຕິບັດ 46 ກິດຈະກຳທີ່ສໍາຄັນຕໍ່ສຸຂະພາບ ທາງເພດ, ສຸຂະພາບຈະເລີນພັນ, ສຸຂະພາບແມ່ ແລະ ເດັກເກີດໃໝ່.



**3** ແຕ່ລະປະເທດໄດ້ພະຍາຍາມຂະຫຍາຍ ແລະ ສະໜອງ ການບໍລິການດ້ານພະດຸງຄັນແບບສະເໝີພາບ, ແຕ່ພັດ ບໍ່ມີຂໍ້ມູນແບບຈໍາແນກ ແລະ ຄົບຖ້ວນເພື່ອໃຫ້ວິໄຈ ການເຂົ້າເຖິງ, ຄວາມເພິ່ງພໍໃຈ ແລະ ຄຸນນະພາບຂອງ ພະນັກງານຜະດຸງຄັນ.

**4** ຜະດຸງຄັນທີ່ໄດ້ຜ່ານການຮໍາຮຽນ ແລະ ໄດ້ກໍານົດ ຕາມມາດຕະຖານສາກົນ ແມ່ນສາມາດສະໜອງ ການດູແລສຸຂະພາບທີ່ຈໍາເປັນ ແລະ ສໍາຄັນ ທີ່ແມ່ ແລະ ເດັກເກີດໃໝ່ຕ້ອງການ ໄດ້ເຖິງ 87 ເປີເຊັນ.



**5** ເພື່ອໃຫ້ຜະດຸງຄັນສາມາດປະຕິບັດວຽກໄດ້ຢ່າງມີປະ ສິດທິຜົນ, ສິ່ງອໍານວຍຄວາມສະດວກຕ່າງໆ ແມ່ນຕ້ອງ ມີໄວ້ເພື່ອສະໜອງຕໍ່ການບໍລິການຢ່າງເໝາະສົມ ຊຶ່ງ ລວມເຖິງພາວະສຸກເສີນຕ່າງໆເຊັ່ນ: ເລືອດທີ່ປອດໄພ, ການຜ່າຕັດເກີດລູກ, ການຟື້ນຟູເດັກເກີດໃໝ່.

**6** ການມີຂໍ້ມູນກ່ຽວກັບພະນັກງານຜະດຸງຄັນທີ່ຖືກ ຕ້ອງສາມາດເຮັດໃຫ້ປະເທດວາງແຜນໄດ້ຢ່າງມີ ປະສິດທິຜົນ. ດັ່ງນັ້ນ ແຕ່ລະປະເທດຈຶ່ງຕ້ອງໄດ້ເກັບ ກໍາຂໍ້ມູນຢ່າງຕໍ່າສຸດ 10 ຢ່າງເຊັ່ນ: ຈໍານວນຜະດຸງຄັນ, ເປີເຊັນໃນການໃຊ້ເວລາໃນການບໍລິການ RMNH, ພາລະບົດບາດ, ເກນອາຍຸ, ອາຍຸບໍານານ, ໄລຍະ ເວລາໃນການສຶກສາ, ການລົງທະບຽນຮຽນ, ການ ຕົກຫຼົ່ນ, ແລະ ການຈົບການສຶກສາ ແລະ ການ ອອກດ້ວຍຄວາມສະໝັກໃຈຈາກການເປັນພະນັກ ງານຜະດຸງຄັນ.

**7** ກົດໝາຍ, ກົດລະບຽບ ແລະ ໃບອະນຸຍາດຜະດຸງ ຄັນຈະເຮັດໃຫ້ຜະດຸງຄັນສາມາດສະໜອງການດູ ແລສຸຂະພາບທີ່ມີຄຸນນະພາບສູງທີ່ເຂົາເຈົ້າໄດ້ຜ່ານ ການຮໍາຮຽນມານັ້ນ ເພື່ອສະໜອງ ແລະ ດູແລ ສຸຂະພາບຂອງແມ່. ການບໍລິການດູແລແມ່ ແລະ ເດັກເກີດໃໝ່ ຂອງຜະດຸງຄັນທີ່ມີຄຸນນະພາບສູງສາ ມາດຊ່ວຍຊີວິດແມ່ ແລະ ເດັກ ໄດ້ ແລະ ຍັງເຮັດໃຫ້ຄອບຄົວມີ ສຸຂະພາບດີ ແລະ ເພີ່ມຜະລິດ ຕະພັນຊຸມຊົນ.

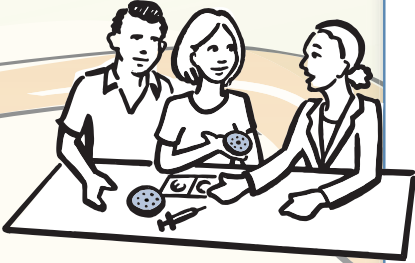


**8** ຜົນຕອບແທນຈາກການລົງທຶນແມ່ນສິ່ງທີ່ "ຄຸ້ມຄ່າ" :

- ການລົງທຶນໃສ່ການສຶກສາດ້ານຜະດຸງຄັນ ພ້ອມກັບການຊັບຊ້ອນການບໍລິການຜະດຸງຄັນ ຊຸມຊົນແມ່ນສາມາດ ໃຫ້ກໍາໄລເຖິງ 16 ທົບ ໃນດ້ານຂອງຊີວິດທີ່ກອບກູ້ໄດ້ ແລະ ການຫຼີກລ້ຽງຄ່າໃຊ້ຈ່າຍ ໃນການຜ່າຕັດ ແລະ ເປັນສິ່ງທີ່ ຄຸ້ມຄ່າໃນດ້ານການບໍລິການດູ ແລສຸຂະພາບຂັ້ນພື້ນຖານ.
- ການລົງທຶນໃສ່ຜະດຸງຄັນຈະປ່ອຍໃຫ້ທ່ານໝໍ, ແພດ ແລະ ຂະແໜງການສາທາລະນະສຸກສຸມ ໃສ່ຄວາມຕ້ອງການດ້ານສຸຂະພາບ ແລະ ເຮັດ ໃຫ້ບັນລຸຜົນໄດ້ຮັບອັນໃຫຍ່ຫຼວງເຊັ່ນ: ການ ຫຼຸດຜ່ອນການຕິດເຊື້ອ, ລົບລ້າງ ການຕາຍຂອງແມ່ ແລະ ເດັກເກີດ ໃໝ່ທີ່ສາມາດຫຼີກລ້ຽງໄດ້.



# ຜະດຸງຄັນ 2030: ທິດທາງສູ່ສຸຂະພາບທີ່ດີ



## ການວາງແຜນຄອບຄົວ ແລະ ການກຽມພ້ອມ ໝາຍເຖິງ:

- ການແຕ່ງງານຊ້າ.
- ຈົບການສຶກສາລະດັບມັດທະຍົມ.
- ສະໜອງເພດສຶກສາທີ່ລະອຽດໃຫ້ແກ່ເດັກຍິງ ແລະ ຜູ້ຊາຍ.
- ປ້ອງກັນການຕິດເຊື້ອ HIV ດ້ວຍຕົນເອງ.
- ຮັກສາສຸຂະພາບທີ່ດີ ແລະ ສະຖານະພາບໄພສະນາການ.
- ວາງແຜນການຖືພາດ້ວຍການນຳໃຊ້ວິທີຄຸມກຳເນີດແບບທັນສະໄໝ.



## ການຮັບປະກັນການເລີ່ມຕົ້ນຂອງການມີສຸຂະພາບດີ ໝາຍເຖິງ:

- ຮັກສາສຸຂະພາບ ແລະ ກຽມພ້ອມເພື່ອການຖືພາ, ການເກີດລູກ, ແລະ ການສ້າງຄອບຄົວໃໝ່ໃນໄລຍະຕົ້ນ.
- ຕ້ອງໄດ້ຮັບການດູແລກ່ອນເກີດ ຫຼື ຝາກທ້ອງ ຢ່າງຕໍ່າ 4 ຄັ້ງ ທີ່ລວມເຖິງການປົກສາຫາລືກ່ຽວກັບການກຽມພ້ອມໃນການເກີດ ແລະ ວາງແຜນສຸກເສີນ.
- ມີການຮຽກຮ້ອງ ແລະ ໄດ້ຮັບການດູແລດ້ານຜະດຸງຄັນທີ່ສາມາດປ້ອງກັນ ແລະ ຊ່ວຍເຫຼືອຢ່າງຊໍານານ ເພື່ອຊ່ວຍແມ່ ແລະ ເດັກໃຫ້ມີສຸຂະພາບແຂງແຮງດີ ແລະ ສາມາດແກ້ໄຂທັນການ ແລະ ມີປະສິດທິຜົນ ເມື່ອເກີດອາການສິນ.

## ແມ່ນຫຍັງທີ່ເຮັດໃຫ້ສິ່ງເຫຼົ່ານີ້ເປັນໄປໄດ້?

1

ແມ່ຍິງທຸກຄົນໃນໄວ  
ຈະເລີນພັນ,  
ລວມທັງໄວທຸ່ມ  
ສາມາດເຂົ້າເຖິງການ  
ດູແລຜະດຸງຄັນ  
ທີ່ທົ່ວເຖິງໃນເວລາທີ່  
ເຂົາເຈົ້າຕ້ອງການ.

2

ລັດຖະບານ  
ຕອບສະໜອງ ແລະ  
ມີຄວາມຮັບຜິດຊອບ  
ຕໍ່ການສ້າງນະໂຍບາຍ  
ທີ່ສະໜັບສະໜູນ  
ຕໍ່ວຽກງານນີ້.

3

ລັດຖະບານ  
ແລະ ລະບົບສາທາ  
ລະນະສຸກຕອບສະ  
ໜອງ ແລະ ມີຄວາມ  
ຮັບຜິດຊອບຕໍ່ການ  
ປະຕິບັດວຽກງານ ແລະ  
ສ້າງສະພາບແວດລ້ອມທີ່  
ອໍານວຍຄວາມສະດວກ  
ນີ້ຢ່າງເຕັມສ່ວນ..

4

ເກັບກຳແລະ  
ວິເຄາະຂໍ້ມູນ  
ແມ່ນຕິດພັນກັບ  
ການຕອບສະໜອງ  
ແລະ ການພັດທະນາ  
ການບໍລິການ  
ຢ່າງເຕັມສ່ວນ.

5

ການດູແລດ້ານ  
ຜະດຸງຄັນ  
ເປັນບຸລິມະສິດ  
ໃນງົບປະມານ  
ສາທາລະນະສຸກແຫ່ງຊາດ,  
ແມ່ຍິງທຸກຄົນແມ່ນ  
ໄດ້ຮັບການປົກປ້ອງ  
ດ້ານການເງິນ  
ຢ່າງທົ່ວເຖິງກັນ.





## ສິ່ງເສີມການເລີ່ມຕົ້ນທີ່ປອດໄພ ໝາຍເຖິງ:

- ການເຂົ້າເຖິງການບໍລິການດ້ານຜະດຸງຄັນຢ່າງປອດໄພກັບສາມີ ຫຼື ພັນລະຍາຂອງຕົນໃນເວລາເກີດ.
- ຊອກຫາການບໍລິການດູແລທີ່ໃຫ້ກຽດຊຶ່ງກັນ ແລະ ກັນ ແລະ ສາມາດຊ່ວຍເຫຼືອ ແລະ ປ້ອງກັນໂດຍຜະດຸງຄັນທີ່ມີຄວາມສາມາດ ແລະ ມີອຸປະກອນເຄື່ອງມືການແພດໃນການຊ່ວຍເກີດ ທີ່ຕ້ອງການ ແລະ ຕ້ອງໄດ້ຮັບການເກີດສຸກເສີນເມື່ອມີຄວາມຕ້ອງການ.
- ມີສ່ວນໃນການຕັດສິນໃຈກ່ຽວກັບການໄດ້ຮັບການດູແລໃຫ້ກັບຕົນເອງ ແລະ ລູກ.
- ມີຄວາມເປັນສ່ວນຕົວ ແລະ ມີບ່ອນພຽງພໍໃນເວລາເກີດໂດຍປາດສະຈາກສິ່ງລົບກວນທີ່ບໍ່ຈໍາເປັນ.
- ຕ້ອງໄດ້ຮັບການຊ່ວຍເຫຼືອຈາກທີມງານຜະດຸງຄັນທີ່ດີໃນເວລາທີ່ຕ້ອງການເກີດສຸກເສີນ.

## ປຸພັນຖານໃຫ້ແກ່ອະນາຄົດ ໝາຍເຖິງ:

- ເລີ່ມໃຫ້ນົມລູກດ້ວຍນົມແມ່ທັນທີຫຼັງຈາກເກີດແລ້ວ ແລະ ຕ້ອງໄດ້ຮັບການສະໜັບສະໜູນໃນການສືບຕໍ່ໃຫ້ນົມລູກດ້ວຍນົມແມ່ໄດ້ດົນເທົ່າທີ່ຕ້ອງການ.
- ໄດ້ຮັບຂໍ້ມູນຂ່າວສານ ແລະ ໄດ້ຮັບການຊ່ວຍເຫຼືອໃນການດູແລເດັກເກີດໃໝ່ໃນຊ່ວງເດືອນ ແລະ ປີທໍາອິດຂອງຊີວິດ.
- ໄດ້ຮັບຂໍ້ມູນຂ່າວສານກ່ຽວກັບການວາງແຜນຄອບຄົວ ເພື່ອສາມາດກໍານົດໄລຍະຫ່າງການຖືພາຄັ້ງຕໍ່ໄປໄດ້ຢ່າງມີປະສິດທິພາບ.
- ໄດ້ຮັບການຊ່ວຍເຫຼືອໂດຍທີມງານຜະດຸງຄັນໃນການເຂົ້າເຖິງການບໍລິການດູແລສຸຂະພາບໃຫ້ແກ່ແມ່ ແລະ ເດັກ ແລະ ໂຄງການສັກຢາວັກແຊງໃນເວລາອັນຄວນ.



**6**

**ການບໍລິການດ້ານຜະດຸງຄັນ**  
ແມ່ນຕອບສະໜອງດ້ວຍການປະຕິບັດຮ່ວມກັນພ້ອມກັບສະມາຄົມ, ຊ່ຽວຊານດູແລສຸຂະພາບ ແລະ ການຈັດພະນັກງານສາທາລະນະສຸກ.

**7**

**ການບໍລິການດ້ານຜະດຸງຄັນຂັ້ນທໍາອິດ**  
ແມ່ນຕ້ອງຢູ່ໃກ້ຊິດກັບແມ່ ແລະ ຄອບຄົວ ໂດຍການສົ່ງຕໍ່ໄປຍັງການດູແລຂັ້ນຕໍ່ໄປໄດ້ຢ່າງລາບລື້ນ.

**8**

**ພະນັກງານຜະດຸງຄັນ**  
ໄດ້ຮັບການສະໜັບສະໜູນຜ່ານການສຶກສາ, ກົດລະບຽບທີ່ມີຄຸນນະພາບ ແລະ ການບໍລິຫານບຸກຄະລາກອນ ແລະ ຊັບພະຍາກອນອື່ນໆ ຢ່າງມີປະສິດທິຜົນ.

**9**

**ຊ່ຽວຊານດ້ານການດູແລສຸຂະພາບທັງໝົດ**  
ແມ່ນຕອບສະໜອງ ແລະ ໃຊ້ງານເພື່ອການບໍລິການດູແລທີ່ມີຄຸນນະພາບ ແລະ ໃຫ້ກຽດກັນ.

**10**

**ສະມາຄົມວິຊາຊີບ**  
ຕອບສະໜອງຄວາມເປັນຜູ້ນໍາໃຫ້ແກ່ສະມາຊິກຂອງເຂົາເຈົ້າ ເພື່ອອໍານວຍຄວາມສະດວກກົດລະບຽບການດູແລທີ່ມີຄຸນນະພາບ.

# ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ

ໃນປີ 2012, ການປະເມີນປະຊາກອນທັງໝົດມີ 6.6 ລ້ານຄົນ, ໃນນັ້ນ, 5.9 ລ້ານຄົນ (89 ເປີເຊັນ) ແມ່ນອາໄສຢູ່ໃນເຂດຊົນນະບົດ ແລະ 0.7 ລ້ານຄົນ (11 ເປີເຊັນ) ແມ່ນອາໄສຢູ່ໃນເຂດເມັດທະຍົມ ແລະ 1.8 ລ້ານຄົນ (26 ເປີເຊັນ) ແມ່ນແມ່ຍິງຢູ່ໃນໄວຈະເລີນພັນ, ອັດຕາການເກີດທັງໝົດແມ່ນ 3. ໃນປີ 2030, ຄາດວ່າປະຊາກອນຈະເພີ່ມຂຶ້ນ 33 ເປີເຊັນ ເປັນ 8.8 ລ້ານຄົນ. ເພື່ອໃຫ້ສາມາດເຂົ້າເຖິງການບໍລິການດູແລແມ່ ແລະ ເດັກເກີດໃໝ່, ສຸຂະພາບທາງເພດ ແລະ ສຸຂະພາບຈະເລີນພັນ, ຜະດຸງຄັນຕ້ອງຕອບສະໜອງການບໍລິການໃຫ້ແກ່ແມ່ຍິງຖືພາຈຳນວນ 0.3 ລ້ານຄົນຕໍ່ປີ ໃນປີ 2030. ຄວາມໝາຍສໍາຄັນຂອງລະບົບສາທາລະນະສຸກ ແມ່ນສາມາດກຳນົດຄ່າ ແລະ ຊັບຊ້ອນພະນັກງານບໍລິການດ້ານ SRMNH ທີ່ສະເໝີພາບ ເພື່ອໃຫ້ທົ່ວເຖິງຢ່າງຕໍ່າ 22.6 ລ້ານຄັ້ງໃນການຝາກທ້ອງ, 3.4 ລ້ານການເກີດ ແລະ 13.7 ລ້ານຄັ້ງການດູແລແມ່ຫຼັງເກີດ/ການດູແລເດັກຫຼັງເກີດ ໃນລະຫວ່າງປີ 2012-2030.

## ສິ່ງທີ່ແມ່ ແລະ ເດັກເກີດໃໝ່ຕ້ອງການ (2012)



308,000 ແມ່ຍິງຖືພາຕໍ່ປີ = ໄດ້ຮັບການດູແລຈັກຄັ້ງ?

ຈຳນວນ ແລະ ການແຈກຢາຍ (2012)



ປະມານ

**ກ່ອນຖືພາ** (ແມ່ຍິງໄວຈະເລີນພັນທຸກຄົນ) = 3,010,000 ຄັ້ງໃນການເຂົ້າພົບແພດເພື່ອປຶກສາເລື່ອງການວາງແຜນຄອບຄົວ

**ການຝາກທ້ອງ** (ຖືພາ x 4) = 1,232,000 ຄັ້ງໃນການຝາກທ້ອງເປັນປະຈຳ

**ການເກີດ** = 186,000 ຜູ້ຊ້າຍນາຊ່ວຍເກີດ

**ການດູແລແມ່ຫຼັງເກີດ** (ການເກີດ x 4) } = 745,000 ຄັ້ງໃນການດູແລແມ່ເປັນປະຈຳ

**ການດູແລເດັກຫຼັງເກີດ** (ເດັກເກີດໃໝ່ x 4)

## ພະນັກງານທີ່ມີສະໜອງໃຫ້ (2012)

ປະເພດຂອງພະນັກງານທີ່ເຮັດວຽກກ່ຽວກັບ MNH<sup>1</sup> ໄລຍະເວລາທີ່ໃຊ້ MNH %

ຜະດຸງຄັນ	673	90
ຜະດຸງຄັນ, ຜູ້ຊ່ວຍ	ບໍ່ມີຂໍ້ມູນ	ບໍ່ມີຂໍ້ມູນ
ພະຍາບານຜະດຸງຄັນ	ບໍ່ມີຂໍ້ມູນ	ບໍ່ມີຂໍ້ມູນ
ພະຍາບານ	ບໍ່ມີຂໍ້ມູນ	ບໍ່ມີຂໍ້ມູນ
ພະຍາບານ/ພະຍາບານຜະດຸງຄັນ, ຜູ້ຊ່ວຍ	ບໍ່ມີຂໍ້ມູນ	ບໍ່ມີຂໍ້ມູນ
ພະນັກງານຄລິນິກ & ຜູ້ຊ່ວຍການຢາ	ບໍ່ມີຂໍ້ມູນ	ບໍ່ມີຂໍ້ມູນ
ແພດ, ແພດທົ່ວໄປ	495	30
ແພດປະສູດ & ແພດພະຍາດຍິງ	105	100



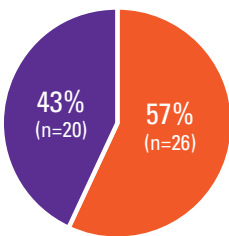
ປະເມີນຜົນຂອງການເຂົ້າເຖິງ = 19%

ພະນັກງານມີເວລາເວລາພະນັກງານທີ່ຕ້ອງການ

ປະເມີນຜົນຂອງການເຂົ້າເຖິງ (ຮວບຮວມລະດັບຊາດ) ອີງຕາມຂໍ້ມູນທີ່ມີຢູ່

## ການເຂົ້າເຖິງດ້ານການເງິນ

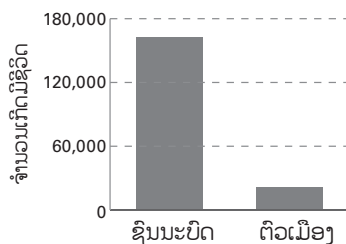
ເປີເຊັນຂອງວຽກງານ RMNH ທີ່ສໍາຄັນທັງ 46 ກິດຈະກຳ ລວມເຖິງຊຸດບໍລິການສຸຂະພາບຢ່າງຕໍ່າໃນປີ 2012



■ ບົກຄຸມ ■ ບໍ່ບົກຄຸມ

## ການເຂົ້າເຖິງດ້ານທີ່ຕັ້ງພູມສັນຖານ

ຈຳນວນການເກີດລູກໂດຍຜູ້ຊ້າຍນາຊ່ວຍເກີດ (SBA)<sup>2</sup>



■ ເຂົ້າເຖິງ SBA ■ ບໍ່ສາມາດເຂົ້າເຖິງ SBA ■ ບໍ່ມີຂໍ້ມູນກ່ຽວກັບ SBA ໃນເຂດຕົວເມືອງ ແລະ ຊຸມຊົນ

## ການສຶກສາຜະດຸງຄັນ

ຢ່າງຕໍ່າລະດັບມັດທະຍົມ ໃນການເລີນຝຶກອົບຮົມ	Grade 10-
ໄລຍະປີຂອງການຮຽນເພື່ອໃຫ້ສໍາເລັດ	(rounded) 1.5
ປັບປຸງຫຼັກສູດຕາມມາດຕະຖານ? ບໍ່ຂອງການປັບປຸງໃໝ່ລ່າສຸດ	ມີ, 2013
ຈຳນວນການເກີດທີ່ມີຜູ້ຊ່ວຍໃນຫຼັກສູດຕໍ່ສຸດໃຫ້ໄດ້	20 ກໍລະນີ
ຈຳນວນຜະດຸງຄັນທີ່ຮຽນຈົບໃນປີ 2012/ເປີເຊັນຂອງຜະດຸງຄັນທີ່ສັບຊ້ອນເຂົ້າເຮັດວຽກ	189/28
ເປີເຊັນຂອງຜະດຸງຄັນທີ່ຮຽນຈົບແລະມີວຽກເຮັດງານທຳພາຍໃນໜັງສືໃນຂົງເຂດ MNH	100%

## ກິດລະບຽບຜະດຸງຄັນ

ກິດລະບຽບທີ່ສັບຊ້ອນຜະດຸງຄັນເປັນອາຊີບສະເພາະ	ບໍ່ມີ
ມີການນິຍາມອາຊີບຜະດຸງຄັນທີ່ເປັນທີ່ຍອມຮັບ	ມີ
ມີໜ່ວຍງານຂອງລັດຖະບານກຳນົດການ ປະຕິບັດຂອງຜະດຸງຄັນ	ມີ
ຕ້ອງການໃບອະນຸຍາດໃຫ້ແກ່ຜະດຸງຄັນເພື່ອປະຕິບັດ	-
ມີການລົງທະບຽນແບບຕໍ່ເນື່ອງໃຫ້ຜະດຸງຄັນທີ່ໄດ້ຮັບອະນຸຍາດ	ມີ
ຈຳນວນໜ້າທີ່ສັນຍານພື້ນຖານຂອງ EmONC ຜະດຸງຄັນໄດ້ຮັບອະນຸຍາດໃຫ້ ປະຕິບັດ (7 ສັນຍານພື້ນຖານ)	7
ມີອະນຸຍາດໃຫ້ຜະດຸງຄັນຕອບສະໜອງວິທີຄຸມກຳນົດ ແບບສັກຢາ/ໃສ່ຮອງ	ມີ/ມີ

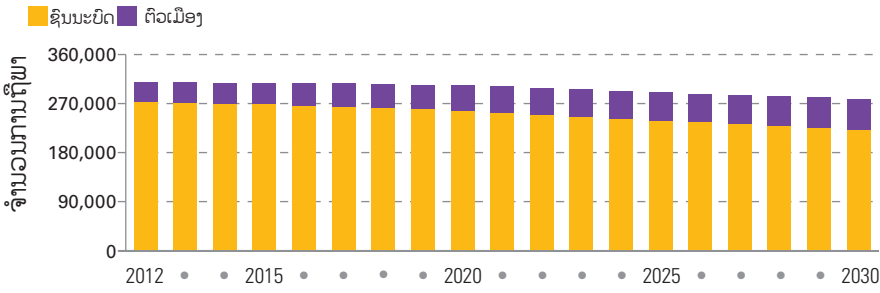
## ສະມາຄົມວິຊາຊີບ

ປີແຫ່ງການສ້າງຕັ້ງສະມາຄົມວິຊາຊີບ	2007
ພາລະບົດບາດຂອງສະມາຄົມວິຊາຊີບ:	
ສືບຕໍ່ພັດທະນາວິຊາຊີບ	
ໃຫ້ຄໍາແນະນຳ/ເປັນແບບຢ່າງໃຫ້ສະມາຊິກທີ່ປະພຶດບໍ່ດີ	
ໃຫ້ຄໍາແນະນຳແກ້ໄຂສະມາຊິກໃນການບໍລິການດູແລ MNH ທີ່ມີມາດຕະຖານແລະຄຸນນະພາບ	
ໃຫ້ຄໍາແນະນຳແກ້ໄຂຖະບານຕໍ່ນະໂຍບາຍທີ່ກ່ຽວກັບ MNH	
ເຈລະຈາປຶກສາຫາລືກັບລັດຖະບານກ່ຽວກັບບັນຫາວຽກງານ ແລະ ເງິນເດືອນ	

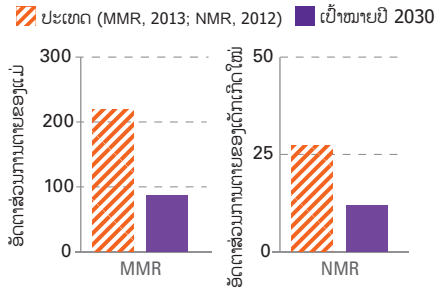
na = ບໍ່ມີການນຳໃຊ້; - = ບໍ່ມີຂໍ້ມູນ



**ຈຳນວນການຖືພາທີ່ຄາດໄວ້ຕາມແຕ່ລະປີ: ລະຫວ່າງເຂດຕົວເມືອງແລະຊົນນະບົດ**



**ການຫຼຸດອັດຕາການຕາຍ**



**ການຄາດຄະເນ ແລະ ຄິດໄລ່ລ່ວງໜ້າ ໃນປີ 2030**

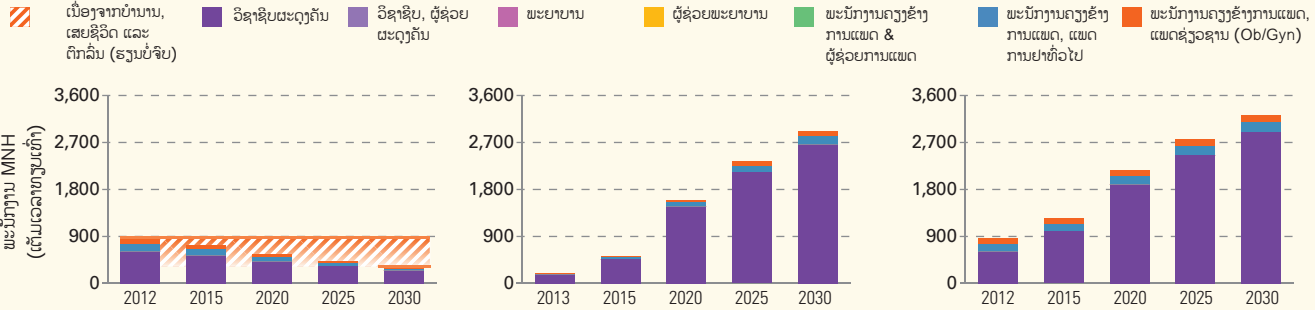
ໃນພາກສ່ວນຂອງການນຳໃຊ້ນີ້ ໄດ້ລາຍງານຂໍ້ມູນຂອງແຕ່ລະປະເທດ ເພື່ອຄິດໄລ່ແຜນງານທີ່ອີງຕາມຄວາມໃຕ້ອງການ ໃນປີ 2030 ການຄາດຄະເນດັ່ງກ່າວ ແມ່ນມີຄວາມລະອຽດອ່ອນຕໍ່ການລົງທະບຽນ ຮຽນ, ຮຽນຈົບ, ເວລາທີ່ໃຊ້ໃນການບໍລິການ MNH ເປັນເປີເຊັນ, ຕານອາຍ, ພາລະບົດບາດ ແລະ ການຕົກລົນ. ໃນກໍລະນີທີ່ບໍ່ມີຂໍ້ມູນ, ແມ່ນຈະນຳໃຊ້ການສົມມຸດຖານທີ່ມີມາດຕະຖານ ແລະ ຫຼັກຖານ. ການຄາດຄະເນດັ່ງກ່າວນີ້ ສາມາດຊື່ໃຫ້ເຫັນ ແລະ ຄວນຖືກນຳໃຊ້ເພື່ອຊີ້ແຈງຄວາມຖືກຕ້ອງຂອງຂໍ້ມູນປະເທດ ແລະ ແຈ້ງໃຫ້ຮູ້ເຖິງການປົກສາຫາລິດ້ານນະໂຍບາຍເພີ່ມຂຶ້ນຕື່ມ. ຂໍ້ມູນເພີ່ມເຕີມກ່ຽວກັບພາກສ່ວນຂອງ ອ່ານໄດ້ແນວໃດ ຢູ່ໜ້າທີ 50

**ຄາດຄະເນການຕົກລົນ**

**ການຄາດຄະເນເຂົ້າຮັບໜ້າທີ່**

**ການຄາດຄະເນພະນັກງານທີ່ມີ**

ການແບ່ງປະເພດອາຊີບຕາມມາດຕະຖານສາກົນ (ISCO-08)



**ສົມມຸດຖານ** ການປະເມີນຂອງການເຂົ້າເຖິງຕາມຄວາມຕ້ອງການແມ່ນອີງຕາມຂໍ້ມູນທີ່ມີຢູ່.

**1 ຈຳນວນການຖືພາໄດ້ຫຼຸດລົງ 20% ໃນປີ 2030?**

0.28 ລ້ານ ປະຈຸບັນ → 0.22 ລ້ານ ສະພາບໃນປີ 2030

ສາມາດເຂົ້າເຖິງການຖືພາ, ການເກີດ, ການດູແລຫຼັງເກີດ ທີ່ເພີ່ມຂຶ້ນໂດຍທັນທີ. ການສູງກູ້ດ້ານການເຂົ້າເຖິງການບໍລິການກ່ອນການຖືພາເລີ່ມແຕ່ປີ 2028 ເປັນຕົ້ນໄປ

**2 ຈຳນວນຜະດຸງຄັນ, ພະຍາຍາມ ແລະ ແພດທີ່ຈິບການສຶກສາ ເພີ່ມຂຶ້ນເປັນ 2 ເທົ່າ ໃນປີ 2020?**

ປະຈຸບັນ → ສະພາບໃນປີ 2030

60% ສາມາດຍັບລຸ່ມໄດ້ໃນປີ 2030 | 91% ສາມາດຍັບລຸ່ມໄດ້ໃນປີ 2030

**3 ປະສິດທິພາບດີຂຶ້ນ 2% ຕໍ່ປີ ຈົນຮອດ ປີ 2030?**

ປະຈຸບັນ → ສະພາບໃນປີ 2030

60% ສາມາດຍັບລຸ່ມໄດ້ໃນປີ 2030 | 85% ສາມາດຍັບລຸ່ມໄດ້ໃນປີ 2030

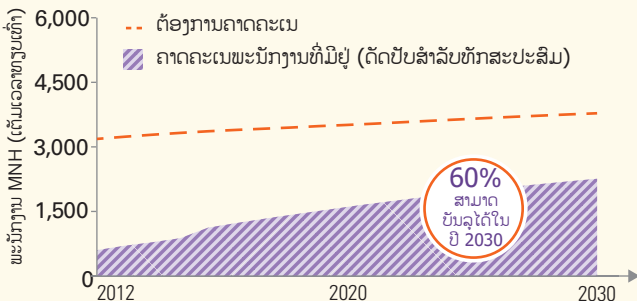
**4 ການຕັດອອກໄດ້ຫຼຸດລົງເລັ່ງໜຶ່ງ ໃນ 5 ປີຂ້າງໜ້າ (2012-2017)?**

ປະຈຸບັນ → ສະພາບໃນປີ 2030

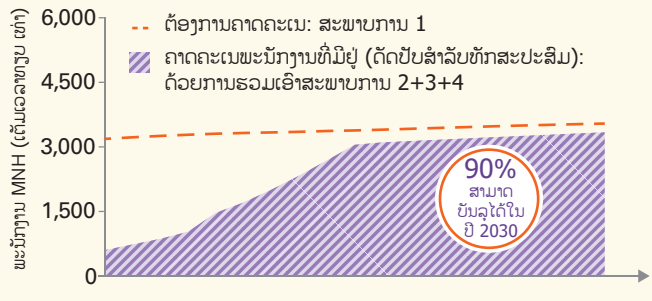
4% leak ປະຈຸບັນ | 2% leak ສະພາບໃນປີ 2030

60% ສາມາດຍັບລຸ່ມໄດ້ໃນປີ 2030 | 70% ສາມາດຍັບລຸ່ມໄດ້ໃນປີ 2030

**ເສັ້ນໂຄຈອນປະຈຸບັນ**



**ເສັ້ນໂຄຈອນສົມມຸດຖານ**



- ປະເພດພະນັກງານສາທາລະນະສຸກມີດັ່ງຕໍ່ໄປນີ້: ຜະດຸງຄັນ ລວມທັງຜະດຸງຄັນຊຸມຊົນ; ແພດທົ່ວໄປ; ລວມມີແພດທົ່ວໄປ, ແພດຄອບຄົວ; ແພດປະສູດ&ແພດພະຍາດຍິງລວມມີແພດປະສູດ&ແພດພະຍາດ ຍິງ, ແຫຼ່ງຂໍ້ມູນ: SoWMy2014 ຫຼື ແຫຼ່ງຂໍ້ມູນອື່ນຈາກສັງເກດການສະພາບສາກົນຂອງ WHO ,ນະໂຍບາຍຂອງລັດຖະບານ.
- ການປົກຄຸມດ້ານ SBA ຕົວເມືອງ/ຊົນນະບົດ ແມ່ນຍັງບໍ່ມີ. ຕົວເລກອີງຕາມການເກີດຢູ່ຕົວເມືອງ/ຊົນນະບົດພຽງຢ່າງດຽວ.
- ຂໍ້ມູນອ້າງເຖິງປະເພດພະນັກງານຜະດຸງຄັນ
- ສະມາຄົມເພື່ອການແພດ ແລະ ຜະດຸງຄັນແຫ່ງຊາດ
- ຂໍ້ມູນເຫຼົ່ານີ້ແມ່ນເປົ້າໝາຍທີ່ໄດ້ສະເໜີໄວ້ສໍາລັບ MMR ແລະ MMR ປີ 2030 ຈາກການແນະນຳຂອງການລົບລ້າງການຕາຍຂອງແມ່ທີ່ຫຼີກລ້ຽງໄດ້ພາຍໃນ ປີ 2030 ແລະ ແຜນປະຕິບັດຕໍ່ເດັກເກີດໃໝ່.

# Executive Summary

*The State of the World's Midwifery (SoWMy) 2014: A Universal Pathway. A Woman's Right to Health* takes its inspiration from the United Nations Secretary-General's *Every Woman Every Child* initiative and his call to action in September 2013 to do everything possible to achieve the Millennium Development Goals (MDGs) by 2015 and work towards the development and adoption of a post-2015 agenda based on the principle of universality.

*SoWMy 2014's* main objective, agreed at the 2nd Global Midwifery Symposium held in Kuala Lumpur in May 2013, is to provide an evidence base on the state of the world's midwifery in 2014 that will: support policy dialogue between governments and their partners; accelerate progress on the health MDGs; identify developments in the three years since the *SoWMy 2011* report was published; and inform negotiations for and preparation of the post-2015 development agenda.

*SoWMy 2014* focuses on 73 of the 75 low- and middle-income countries that are included in the "Countdown to 2015" reports. More than 92% of all the world's maternal and newborn deaths and stillbirths occur within these 73 countries. However, only 42% of the world's medical, midwifery and nursing personnel are available to women and newborn infants (hereafter 'newborns') in these countries.

Midwifery is a key element of sexual, reproductive, maternal and newborn health (SRMNH) care and is defined in this report as: the health services and health workforce needed to support and care for women and newborns, including sexual and reproductive health and especially pregnancy, labour and postnatal care. This enables analysis of the diverse ways in which midwifery is delivered by a range of health-care professionals and associate professionals.

*SoWMy 2014* has been co-ordinated by the United Nations Population Fund, the International Confederation of Midwives and the World Health Organization on behalf of government representatives and national stakeholders in the 73 countries and 30 global development partners.





## Midwifery is a key element of sexual, reproductive, maternal and newborn health (SRMNH) care

(Jhpiego/Kate Holt)

The evidence and analysis in *SoWMy 2014* is structured by the four domains that determine whether a health system and its health workforce are providing effective coverage, i.e. whether women are obtaining the care they want and need in relation to SRMNH services. These four domains are: availability, accessibility, acceptability and quality.

**Availability:** *SoWMy 2014* provides new estimates of the essential SRMNH services needed by women and newborns. This need for services, in each country, can be converted into the need for the midwifery workforce.

**Accessibility:** Although nearly all of the 73 countries recognize the importance of financial accessibility and have a policy of offering at least some essential elements of SRMNH care free of charge at the point of access, only 4 provide a national “minimum guaranteed benefits package” for SRMNH that includes all the essential interventions.

**Acceptability:** Most countries have policies in place to deliver SRMNH care in ways that are sensitive to social and cultural needs. However, data on women's perceptions of midwifery care are scarce, and countries acknowledge the need for more robust research on this topic. Contributors to the *SoWMy 2014* workshops noted that the issue of acceptability is strongly linked to discrimination and the status of women generally, both as service users and health workers.

**Quality** of both care and care providers can be increased by improving the quality of midwifery education, regulation and the role of professional associations. *SoWMy 2014* indicates that although the curricula in most countries are appropriate and up-to-date, pervasive gaps remain in education infrastructure, resources and systems, particularly for direct-entry midwifery programmes.

There are substantial gaps in effective coverage in both the availability and quality dimensions. Reducing these gaps requires the collection and better use of workforce data and leadership to prioritize midwifery and release resources to support workforce and service planning. The minimum 10 data elements required for health workforce planning are: headcount, percentage time spent on SRMNH, roles, age distribution, retirement age, length of education, enrolments into, attrition and graduation from education, and voluntary attrition from the workforce.

**Midwifery2030:** Quality midwifery care is central to achieving national and global priorities and securing the rights of women and newborns. *SoWMy 2014* has developed *Midwifery2030* as a pathway for policy and planning. Starting from the premises that pregnant women are healthy unless complications, or signs thereof, occur, and that midwifery care provides preventive and supportive care with access to emergency care when needed, it promotes woman-centred and midwife-led models of care, which have been shown to generate greater benefits and cost savings than medicalized models of care.

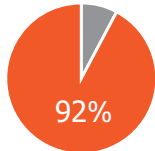


Not all countries have a dedicated professional cadre focused on supporting women and newborns. (*Mamaye/Sierra Leone*)



The report shows that:

**1** The 73 Countdown countries included in the report account for more than **92% OF GLOBAL MATERNAL AND NEWBORN DEATHS AND STILLBIRTHS** but have only **42% OF THE WORLD'S MEDICAL, MIDWIFERY AND NURSING PERSONNEL**.



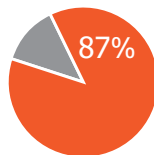
Within these countries, workforce deficits are often most acute in areas where maternal and newborn mortality rates are highest.

**2** **ONLY 4 OF THE 73 COUNTRIES** have a midwifery workforce that is able to meet the universal need for the 46 essential interventions for sexual, reproductive, maternal and newborn health.



**3** Countries are endeavouring to expand and deliver equitable midwifery services, but **COMPREHENSIVE, DISAGGREGATED DATA** for determining the availability, accessibility, acceptability and quality of the midwifery workforce **ARE NOT AVAILABLE**.

**4** Midwives who are educated and regulated to international standards can provide **87% OF THE ESSENTIAL CARE** needed for women and newborns.



**5** In order for midwives to work effectively, **FACILITIES NEED TO BE EQUIPPED TO OFFER THE APPROPRIATE SERVICES**, including for emergencies (safe blood, caesarean sections, newborn resuscitation).

**6** Accurate data on the midwifery workforce enable countries to plan effectively. This requires **A MINIMUM OF 10 PIECES OF INFORMATION THAT ALL COUNTRIES SHOULD COLLECT**: headcount, percentage time spent on SRMNH, roles, age distribution, retirement age, length of education, enrolments into, attrition and graduation from education, and voluntary attrition from the workforce.

**7** Legislation, regulation and licensing of midwifery allow midwives to provide the high-quality care they are educated to deliver and thus protects women's health. High-quality midwifery care for women and newborns saves lives and **CONTRIBUTES TO HEALTHY FAMILIES AND MORE PRODUCTIVE COMMUNITIES**.



**8** The returns on investment are a "best buy":

- Investing in midwifery education, with deployment to community-based services, could yield a **16-FOLD RETURN ON INVESTMENT** in terms of lives saved and costs of caesarean sections avoided, and is **A "BEST BUY" IN PRIMARY HEALTH CARE**.



- Investing in midwives frees doctors, nurses and other health cadres to focus on other health needs, and contributes to achieving a grand convergence: reducing infections, **ENDING PREVENTABLE MATERNAL MORTALITY** and **ENDING PREVENTABLE NEWBORN DEATHS**.





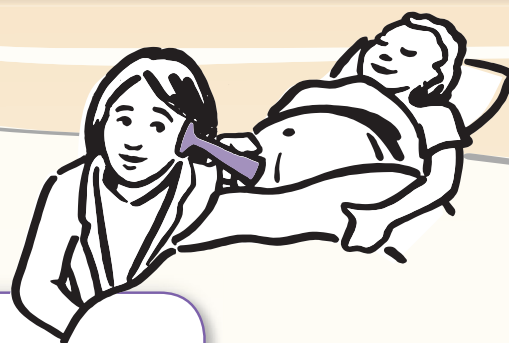
# MIDWIFERY 2030

## A PATHWAY TO HEALTH



### PLANNING AND PREPARING *means:*

- delaying marriage
- completing secondary education
- providing comprehensive sexual education for boys and girls
- protecting yourself against HIV
- maintaining a good health and nutritional status
- planning pregnancies using modern contraceptive methods



### ENSURING A HEALTHY START *means:*

- maintaining your health and preparing yourself for pregnancy, childbirth and the early months as a new family
- receiving at least four antenatal care visits, which include discussing birth preparedness and making an emergency plan
- demanding and receiving professional supportive and preventive midwifery care to help you and your baby stay healthy, and to deal with complications effectively, should they arise

## WHAT MAKES THIS POSSIBLE?

1

**All women of reproductive age**, including adolescents, have universal access to midwifery care when needed.

2

**Governments** provide and are held accountable for a supportive policy environment.

3

**Governments** and health systems provide and are held accountable for a fully enabled environment.

4

**Data collection and analysis** are fully embedded in service delivery and development.

5

**Midwifery care** is prioritized in national health budgets; all women are given universal financial protection.



### **SUPPORTING A SAFE BEGINNING** *means:*

- safely accessing midwifery services with the partner of your choice when labour starts
- finding respectful, supportive and preventive care, provided by competent midwives who have access to the equipment and supplies they need and receiving emergency obstetric care if required
- participating in decisions about how you and your baby are cared for
- having the privacy and space to experience birth without unnecessary disturbance and interventions
- being supported by a collaborative midwifery team in the event that you do need emergency obstetric care

### **CREATING A FOUNDATION FOR THE FUTURE** *means:*

- starting to breastfeed immediately and being supported to continue breastfeeding as long as you wish
- being provided with information about and support in caring for your child in the first months and years of life
- receiving information about family planning so you can efficiently space your next pregnancy
- being supported by the midwifery team to access child and family health services and vaccination programmes at the appropriate time



**6**

**Midwifery care** is delivered in collaborative practice with health-care professionals, associates and lay health workers.

**7**

**First-level midwifery care** is close to the woman and her family with seamless transfer to next-level care.

**8**

**The midwifery workforce** is supported through quality education, regulation and effective human and other resource management.

**9**

**All health-care professionals** provide and are enabled for delivering respectful quality care.

**10**

**Professional associations** provide leadership to their members to facilitate quality care provision.

# HOW TO USE THE *SOWMY* 2014 COUNTRY BRIEFS

The country brief has been designed to prompt and inform policy discussions on how the composition, skill-mix, deployment and enabling environment of the midwifery workforce impacts on the delivery of SRMNH services for all women and newborns who need them. This visual guide describes the graphics on the two-page country brief and provides examples of the indicative policy questions that may arise.

## First page: Where are we now?

The first page of the country brief can be used to discuss the extent to which the workforce is currently able to deliver SRMNH services for all women and newborns who need them. Proxies for availability, accessibility and quality are presented to facilitate these discussions. All data are from 2012.

### WHAT DO WOMEN AND NEWBORNS NEED?

The brief starts by showing some of the indicators of need that must be met if universal coverage is to be attained. The number of pregnancies, their geographical distribution, and the volume of services that must be provided are displayed in this section. Other needs include the provision of sexual and reproductive health services, including addressing unmet need for family planning.

**Indicative policy question:** *Is the policy and planning environment in the country consistent with universal coverage of SRMNH services, responsive to what women and newborns need?*

### WORKFORCE AVAILABILITY AND MET NEED

The brief then considers how many health workers are available to meet this need. The number (by headcount) of all workers reported and the percentage time each one spends on MNH services are shown. This information provides the number of available health workers by their full-time equivalent. Only by considering the number of full-time equivalent health workers can a true picture of availability be constructed. Health workers are grouped by category, while their country cadre name is provided in footnote 1.

The section also provides an estimate of how workforce availability compares with need. An estimated percentage for the national aggregate summarizes the extent to which the available midwifery workforce, taking into account which health workers provide which services, has enough time to deliver the 46 essential SRMNH interventions to all women and newborns who need them. The estimate of met need is highly sensitive to the package of care (e.g. the 46 essential interventions), the number of health workers reported, the percentage of time they spend on SRMNH services, and the roles they perform.

**Indicative policy questions:** *Have all cadres that contribute to the midwifery workforce been reported, by name and by the percentage of time each cadre spends on SRMNH services? Does the estimate of met need at the national aggregate level mask inequities, e.g. at the sub-national level, or when disaggregated by urban/rural and socio-economic strata?*

### FINANCIAL ACCESSIBILITY

Even if there are sufficient health workers, the services they provide may not be affordable. This graph shows the number of the 46 essential SRMNH interventions that are included in each country's minimum health benefits package and available free at the point of delivery, as an indication of the degree of financial protection offered to women and their newborns in accessing SRMNH care.

**Indicative policy questions:** *Is the minimum health benefits package guaranteed to all women regardless of ability to pay? Are there national plans to provide a package of SRMNH services that include and go beyond the 46 essential interventions?*

### GEOGRAPHICAL ACCESSIBILITY

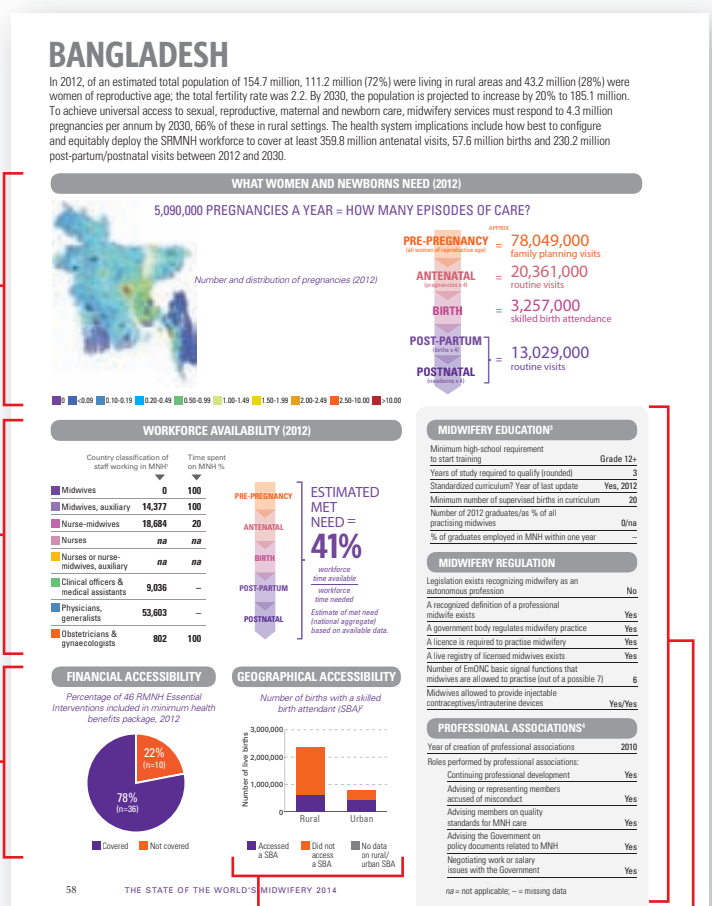
Health workers, and the facility from which they work, may not be equally distributed with regards to need. This graph shows the number of births in urban versus rural areas to indicate the geographical need for SRMNH services. Where data are available the graph also shows the number of births where a skilled birth attendant was reportedly available. This provides an indicative measure of workforce accessibility.

**Indicative policy question:** *Is there a marked difference in access to the midwifery workforce in urban and rural areas and what policy measures can be taken to address this?*

### EDUCATION, REGULATION, ASSOCIATION

Education, regulation and professional associations are all crucial to support health workers in delivering quality midwifery care. This section provides information on the strength of the enabling environment within a country.

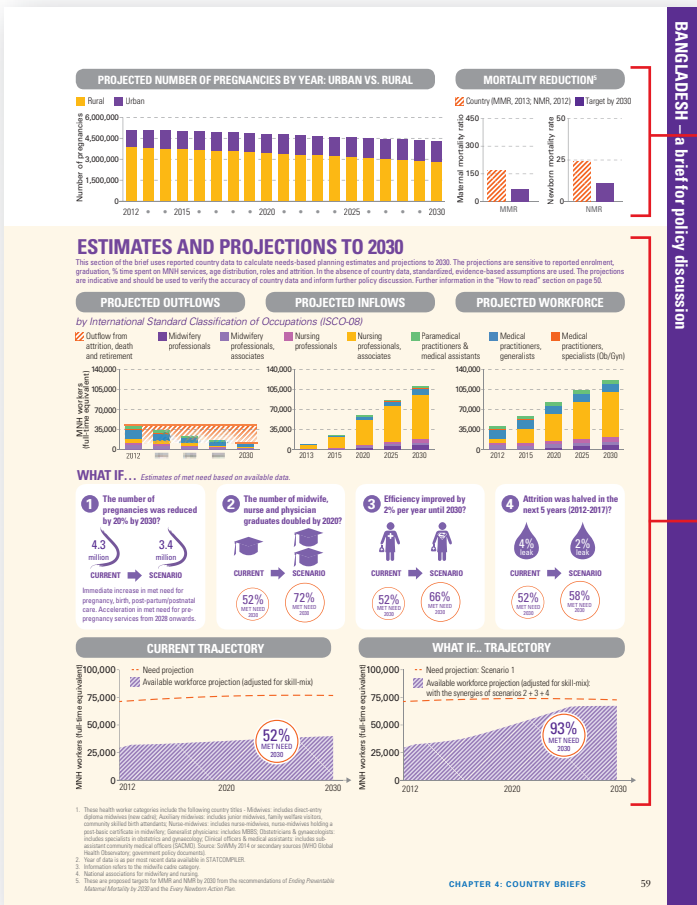
**Indicative policy question:** *Is the enabling environment for quality health workers and quality health services meeting national and international standards, and if not where can progress be made?*





## Second page: What might 2030 look like?

The second page of the country brief aims to prompt policy discussion on the future evolution of the midwifery workforce compared with the future scale of population need. The last section, "Estimates and projections to 2030", compares future availability of the health workforce and future needs for SRMNH services under a variety of scenarios. Given the absence of data in some countries, this analysis should be seen as a starting point for policy discussions (including around the availability and quality of national data) rather than as a statement of fact.



### PROJECTED PREGNANCIES AND MORTALITY REDUCTION

Achieving universal coverage means anticipating and responding to future needs. This section shows the evolution of need (expressed as the annual number of pregnancies in urban and rural areas) in the period 2012-2030. Other needs for sexual and reproductive health services will be determined by changes in the number of women of reproductive age, including the number of adolescents.

The section also provides an indication of the targets for reductions in maternal and neonatal mortality, as proposed in the Ending Preventable Maternal Mortality by 2030 initiative and the Every Newborn Action Plan. These proposed targets are subject to national policy priorities and decisions.

**Indicative policy questions:** *Is there an opportunity in your country to address unmet need for family planning and therefore reduce the annual number of pregnancies? What is the impact of urban/rural population change on the selection, education and deployment of the midwifery workforce? What are the midwifery workforce implications to achieve the accelerated reductions in maternal and neonatal mortality by 2030?*

### ESTIMATES AND PROJECTIONS TO 2030

This section illustrates the potential evolution of the midwifery workforce under "business as usual" assumptions and according to different policy scenarios.

The first row of three graphs considers the number of health workers who will enter and exit the midwifery workforce in the period 2012 - 2030. The graph to the left illustrates how the full-time equivalent number of health workers will reduce over time, and the shaded area represents the 'outflows' in this period. The graph in the centre identifies the entries from national education institutions, and the third graph to the right the cumulative effect of entries and exits.

'What if' scenarios are presented as examples. These illustrate the potential impact of policy decisions and demonstrate the changes in met need that could be realised through four different scenarios: reducing the number of pregnancies per annum, increasing the supply of midwives, nurses and physicians, improving efficiency and reducing voluntary attrition. The bottom two graphics highlight the difference between "business as usual" and the combination of the policy scenarios. The changes in met need are based on the country data reported and a standard set of decision rules in Annex 5.

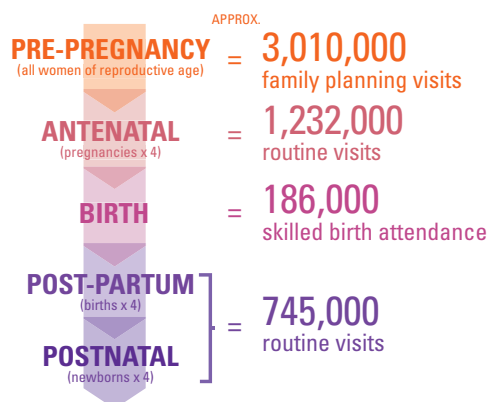
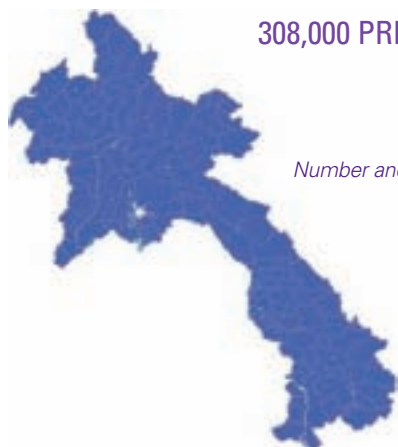
**Indicative policy questions:** *What are the opportunities to improve the efficiency and management of the current midwifery workforce? What is the turnover of the midwifery workforce today, and are there mechanisms in place to capture all exits and understand why health workers are leaving? What are the national policy priorities for the skill-mix and deployment of the midwifery workforce and how will this impact on met need?*

# LAO PEOPLE'S DEMOCRATIC REPUBLIC

In 2012, of an estimated total population of 6.6 million, 5.9 million (89%) were living in rural areas and 1.8 million (26%) were women of reproductive age; the total fertility rate was 3. By 2030, the population is projected to increase by 33% to 8.8 million. To achieve universal access to sexual, reproductive, maternal and newborn care, midwifery services must respond to 0.3 million pregnancies per annum by 2030. The health system implications include how best to configure and equitably deploy the SRMNH workforce to cover at least 22.6 million antenatal visits, 3.4 million births and 13.7 million post-partum/postnatal visits between 2012 and 2030.

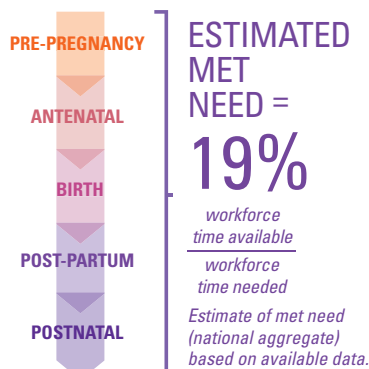
## WHAT WOMEN AND NEWBORNS NEED (2012)

### 308,000 PREGNANCIES A YEAR = HOW MANY EPISODES OF CARE?



## WORKFORCE AVAILABILITY (2012)

Country classification of staff working in MNH <sup>1</sup>	Time spent on MNH %
Midwives	673 90
Midwives, auxiliary	na na
Nurse-midwives	na na
Nurses	na na
Nurses or nurse-midwives, auxiliary	na na
Clinical officers & medical assistants	na na
Physicians, generalists	495 30
Obstetricians & gynaecologists	105 100



## MIDWIFERY EDUCATION<sup>3</sup>

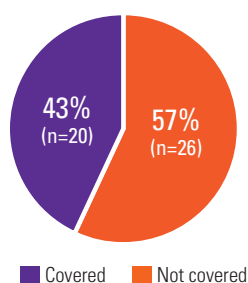
Minimum high-school requirement to start training	Grade 10-
Years of study required to qualify (rounded)	1.5
Standardized curriculum? Year of last update	Yes, 2013
Minimum number of supervised births in curriculum	20
Number of 2012 graduates/as % of all practising midwives	189/28
% of graduates employed in MNH within one year	100%

## MIDWIFERY REGULATION

Legislation exists recognizing midwifery as an autonomous profession	No
A recognized definition of a professional midwife exists	Yes
A government body regulates midwifery practice	Yes
A licence is required to practise midwifery	-
A live registry of licensed midwives exists	Yes
Number of EmONC basic signal functions that midwives are allowed to practise (out of a possible 7)	7
Midwives allowed to provide injectable contraceptives/intrauterine devices	Yes/Yes

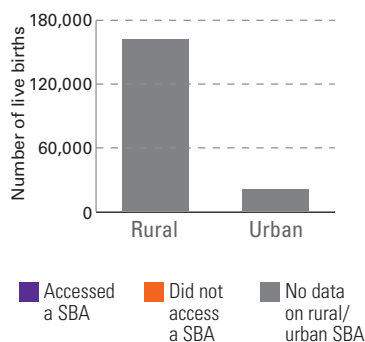
## FINANCIAL ACCESSIBILITY

Percentage of 46 RMNH Essential Interventions included in minimum health benefits package, 2012



## GEOGRAPHICAL ACCESSIBILITY

Number of births with a skilled birth attendant (SBA)<sup>2</sup>



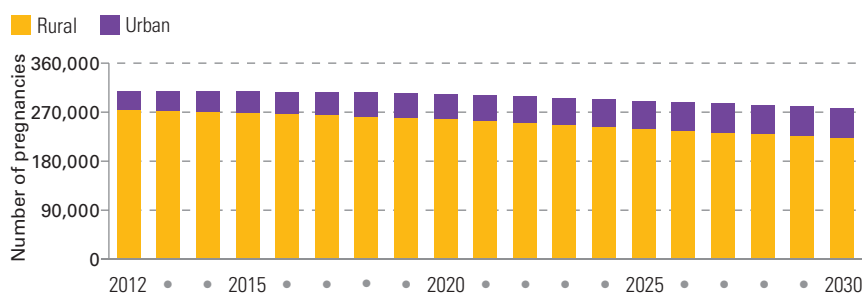
2014

## PROFESSIONAL ASSOCIATIONS<sup>4</sup>

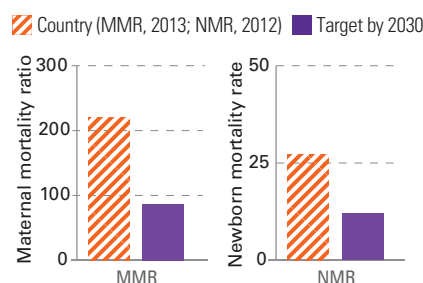
Year of creation of professional associations	2007
Roles performed by professional associations:	
Continuing professional development	No
Advising or representing members accused of misconduct	No
Advising members on quality standards for MNH care	No
Advising the Government on policy documents related to MNH	No
Negotiating work or salary issues with the Government	No

na = not applicable; - = missing data

### PROJECTED NUMBER OF PREGNANCIES BY YEAR: URBAN VS. RURAL



### MORTALITY REDUCTION<sup>5</sup>



## ESTIMATES AND PROJECTIONS TO 2030

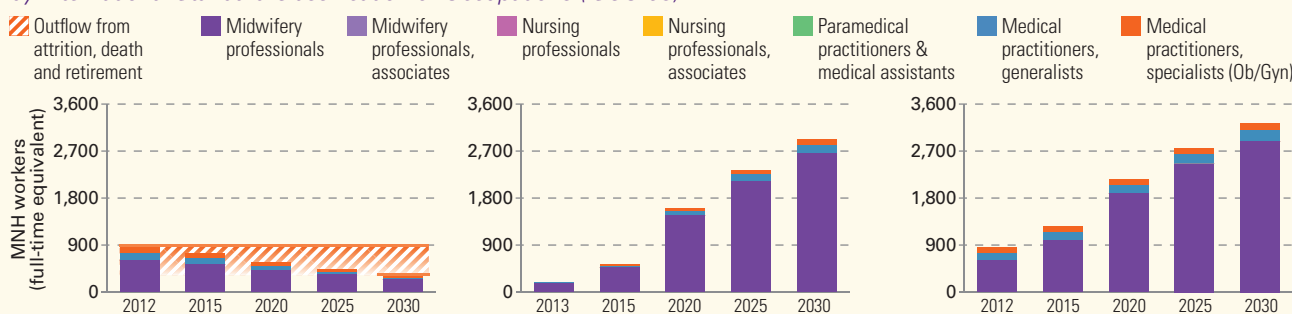
This section of the brief uses reported country data to calculate needs-based planning estimates and projections to 2030. The projections are sensitive to reported enrolment, graduation, % time spent on MNH services, age distribution, roles and attrition. In the absence of country data, standardized, evidence-based assumptions are used. The projections are indicative and should be used to verify the accuracy of country data and inform further policy discussion. Further information in the "How to read" section on page 50.

### PROJECTED OUTFLOWS

### PROJECTED INFLOWS

### PROJECTED WORKFORCE

by International Standard Classification of Occupations (ISCO-08)



### WHAT IF... Estimates of met need based on available data.

**1** The number of pregnancies was reduced by 20% by 2030?

0.28 million (CURRENT) → 0.22 million (SCENARIO)

Immediate increase in met need for pregnancy, birth, post-partum/postnatal care. Acceleration in met need for pre-pregnancy services from 2028 onwards.

60% MET NEED 2030

**2** The number of midwife, nurse and physician graduates doubled by 2020?

60% MET NEED 2030 → 91% MET NEED 2030

**3** Efficiency improved by 2% per year until 2030?

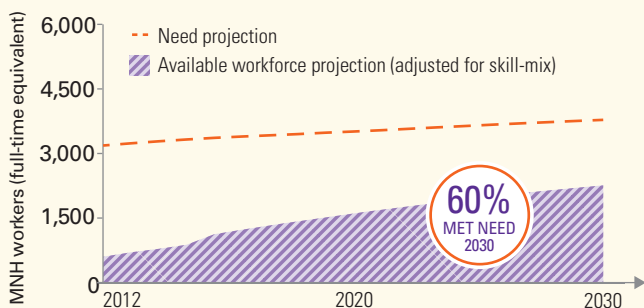
60% MET NEED 2030 → 85% MET NEED 2030

**4** Attrition was halved in the next 5 years (2012-2017)?

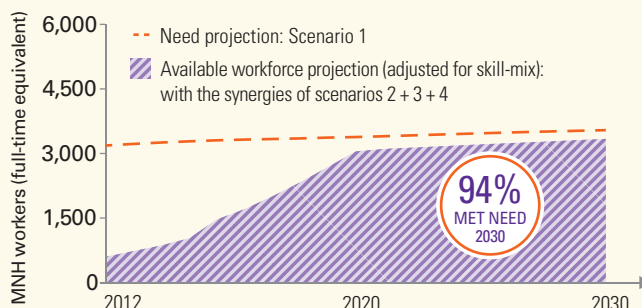
4% leak (CURRENT) → 2% leak (SCENARIO)

60% MET NEED 2030 → 70% MET NEED 2030

### CURRENT TRAJECTORY



### WHAT IF... TRAJECTORY



1. These health worker categories include the following country titles - Midwives: includes community midwives; Generalist physicians: includes generalist physicians, family medicine; Obstetricians & gynaecologists includes: obstetricians & gynaecologists. Source: SoWMy 2014 or secondary sources (WHO Global Health Observatory; government policy documents).

2. Rural/urban SBA coverage is not available. Figure refers to rural/urban births only.

3. Information refers to the midwife cadre category.

4. National associations for midwifery and nursing.

5. These are proposed targets for MMR and NMR by 2030 from the recommendations of *Ending Preventable Maternal Mortality by 2030* and the *Every Newborn Action Plan*.



## ANNEX 1: GLOSSARY

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**Acceptability (of health services):** Dimension of the right to health, which requires that all health facilities, goods and services must be respectful of medical ethics and culturally appropriate, as well as sensitive to gender and life-cycle requirements [1].

**Acceptability (of the health workforce):** The characteristics and ability of the workforce to treat everyone with dignity, create trust and enable or promote demand for services [2].

**Accessibility (of health services):** Dimension of the right to health, which requires that health facilities, goods and services are accessible to everyone within the jurisdiction of the State Party. Accessibility has four overlapping dimensions: non-discrimination; physical accessibility; economic accessibility (affordability) and information accessibility [1].

**Accessibility (of the health workforce):** The equitable access to health workers, including in terms of travel time and transport, opening hours and corresponding workforce attendance, whether the infrastructure is disability-friendly, referral mechanisms and the direct and indirect cost of services, both formal and informal [2].

**Accreditation:** A process designed to confirm the educational quality of new, developing and established education and training programmes. It is usually carried out by peer/third-party review against established standards/outcomes [3].

**Association (or College):** An organized body of persons engaged in a common professional practice, sharing information, career-advancement objectives, in-service training, advocacy and other activities. It usually defends the interests of the profession and the professionals, but is not a union.

**Auxiliary midwife:** A health worker assisting in the provision of maternal and newborn health care, particularly during childbirth, who possesses some of the competencies in midwifery but is not a fully qualified/licensed midwife. In the latest International Standard Classification of Occupations (ISCO-08), these are also referred to as midwifery associate professionals [4].

**Auxiliary nurse-midwife:** A health worker assisting in the provision of maternal and newborn health care, particularly during childbirth but also in the prenatal and post-partum periods, who possesses some of the competencies in midwifery but is not a fully qualified/licensed nurse-midwife.

**Availability (of health services):** Dimension of the right to health that requires functioning public health and health-care facilities, goods and services, as well as programmes in sufficient quantity [1].

**Availability (of the health workforce):** The sufficient supply and stock of health workers, with the relevant competencies and skill mix that correspond with the health needs of the population [2].

**Community health worker (CHW):** According to the WHO definition, community health workers should be members

of the communities where they work, should be selected by the communities, should be answerable to the communities for their activities, should be supported by the health system but not necessarily a part of its organization, and have shorter training than professional workers [5].

**Council, Board, Order or Ordem:** A regulatory institution responsible for the registration and licensing of professionals, enabling them to practise, while overseeing their professional conduct and ensuring the ethics of the profession. Usually accredits educational institutions and programmes, sometimes in collaboration with the government or other bodies. It may be government-led, professional-led or mixed. It normally defends patients' interests.

**Efficiency:** The capacity to produce the maximum output for a given input [6].

**Emergency obstetric and neonatal care facilities, basic (B-EmONC):** Peripheral health facilities with maternity and newborn services that have practised in the past three months all seven basic signal functions: parenteral administration of antibiotics, anticonvulsants, oxytocics, manual removal of placenta, manual vacuum aspiration for retained products, assisted instrumental delivery by vacuum extractor, and newborn resuscitation with mask. The functions include stabilization of mothers and newborns with complications before and during transfer to a higher-level hospital [7].

**Emergency obstetric and neonatal care facilities, comprehensive (C-EmONC):** Health facilities with maternity services that have practised in the past three months all seven B-EmONC signal functions listed above plus two additional signal functions: emergency surgery (caesarean section) and safe blood transfusion (can also include advanced newborn resuscitation) [7].

**Equity (in health):** The absence of systematic or potentially remediable differences in health status, access to health care and health-enhancing environments, and treatment in one or more aspects of health across populations or population groups defined socially, economically, demographically or geographically within and across countries [6].

**Licensing:** Generally involves conferring upon an individual a licence to practise their particular health-care profession. Many countries do not distinguish between licensing and registration (see definition below) and both may be partial/temporary/ conditional in certain circumstances (for instance, newly qualified professionals in some countries) [3].

**Millennium Development Goal (MDG):** Eight MDGs were adopted by world leaders at the Millennium Summit at the United Nations in 2000, with the global aim of reaching equitable development by 2015. MDG 4 is to reduce the under-5 mortality rate by two thirds of its 1990 value. MDG 5 is to improve maternal health by reducing the maternal mortality ratio by three quarters of its 1990 value by 2015 (Target 5A). The proportion of births attended by skilled health personnel is used as an official indicator of this target. In 2005 the international community added a second

target to MDG 5 (Target 5B): to achieve universal access to reproductive health by 2015. MDG 6 is to combat HIV/AIDS, tuberculosis, malaria and other infectious diseases [8].

**Maternal and newborn health (MNH):** The health of women during pregnancy, labour, childbirth and the post-partum period, as well as the health and survival of the foetus during labour and the newborn within the first few hours and days, a period during which the newborn is mostly cared for by a professional birth attendant (and in privileged circumstances by a neonatologist). This operational definition differentiates newborn health from neonatal health, which spans the period from birth to the end of the fourth week after birth, and is in accordance with the H4+ (UNAIDS, UN Women, WHO, UNFPA, UNICEF and the World Bank) consensus.

**Midwife:** The report uses the term “midwife” to include those health professionals who are educated to undertake the roles and responsibilities of a midwife regardless of their educational pathway to midwifery, whether direct-entry or after basic nursing.

This definition is aligned with the recommendations and position statements of the International Confederation of Midwives and the International Council of Nurses.

ICM defines a midwife as: A person who, having been regularly admitted to a midwifery educational programme, duly recognized in the country in which it is located: has successfully completed the prescribed course of studies in midwifery that is based on the ICM Essential Competencies for Basic Midwifery Practice and the framework of the ICM Global Standards for Midwifery Education; has acquired the requisite qualifications to be registered and/or legally licensed to practise midwifery and use the title “midwife”; and demonstrates competency in the practice of midwifery [9].

**Midwifery:** Encompasses the health services and health workforce needed to support and care for women and newborns during pre-pregnancy, pregnancy, labour, and the post-partum/postnatal period.

It includes: measures aimed at preventing health problems in pregnancy, the detection of abnormal conditions, the procurement of medical assistance when necessary, and the execution of emergency measures in the absence of medical help [10].

**Midwifery workforce:** The health professionals whose primary function includes health services provided to women during pregnancy, labour and birth, as well as post-partum care for mothers and newborns. The definition includes midwives and others competent in the practice of midwifery, such as nurse-midwives and doctors with relevant competence (and in certain countries, auxiliary nurse midwives). These professionals are also referred to as skilled birth attendants [11].

**Midwife-led maternity unit:** Birth centres that are staffed and managed by midwives [12].

**Minimum guaranteed benefits package:** In the context of this report, this refers to a set of health services that a

government has committed itself to making available to all, free at the point of access. It can also be called an essential health package, which, in a low-income country, consists of a limited list of public health and clinical services which will be provided at primary and/or secondary care level [13].

**Nurse-midwife:** A person who is legally licensed/registered to practise the full scope of nursing and midwifery in his/her country [14].

**Quality (of health services):** Dimension of the right to health, which requires that health facilities, goods and services must be scientifically and medically appropriate and of good quality [1].

**Quality (of the health workforce):** The competencies, skills, knowledge and behaviour of the health worker assessed according to professional norms and as perceived by users [2].

**Registration:** Generally refers to the process of enrolling with a professional regulatory body following graduation from an accredited programme. Many countries do not distinguish between registration and licensing, but some do and a licence to practise may be issued by a separate authority, particularly in countries where the processes are managed at subnational level. Both licensing and registration may be partial/temporary/conditional under certain circumstances (for instance, newly qualified professionals in some countries) [3].

**Regulation:** Act of controlling professional practice in accordance with laws, policies and standards, and ethics. It can apply to education, practice, management of the profession, career advancement, etc.

**Sexual, reproductive, maternal and newborn health (SRMNH):** Health services provided in the continuum of care, from information, education and counselling on human sexuality to antenatal, safe delivery and post-natal care, as defined in the ICPD Programme of action, 1994 [15].

**Skilled birth attendant:** Defined by the WHO as an accredited health professional — such as a midwife, doctor or nurse — who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and newborns [16].

**Skills:** Abilities learned through training or acquired by experience to perform specific actions or tasks, usually associated with individual tasks or techniques, particularly requiring the use of the hands or body.

**Union:** A form of professional association that can include more than one type of health worker, generally independent of government, whose purpose is to defend the interests of the workers. In some countries the professional association is called a union.

**Vulnerable:** Vulnerable groups, usually women, children and elderly people, are associated with poverty, but vulnerability can also arise when people are isolated, insecure and defenceless in the face of risk, shock or stress [17].

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## ANNEX 2: GENERAL METHODOLOGY

This Annex describes how the SoWMy 2014 study was designed and conducted.

ICM, UNFPA and WHO co-chaired the development and launch of the *SoWMy 2014* report, with UNFPA and WHO coordinating on behalf of the H4+ agencies (UNAIDS, UNFPA, UNICEF, UN Women, the World Bank and WHO).

ICS Integrare, a UNFPA Implementing Partner, managed the research, writing, production and launch of the report, with research support from the University of Southampton (UK) and the University of Technology, Sydney (Australia). The Averting Maternal Death and Disability programme at the Mailman School of Public Health, ICM, Jhpiego, an affiliate of Johns Hopkins University (USA), the World Bank and WHO provided additional technical contributions.

### Methods

#### **Overall design**

There were two strands to the primary data collection:

- (1) a self-completion questionnaire to collect quantitative data on selected indicators, distributed to each of the 75 countries;
- (2) a full-day deliberative workshop of national stakeholders and experts. It was recommended that all 75 countries hold a workshop.

The aim of the questionnaire was to elicit quantitative data on key indicators relating to the midwifery workforce and SRMNH services. The questionnaire was based on that used for the 2011 report, with key questions repeated to enable analysis of change over time in the 58 countries invited to take part in both surveys. It was amended to address lessons learned during the 2011 study, and to include a stronger focus on the size and structure of the midwifery workforce, as well as the key related issues of education, regulation and association and health service infrastructure.

The aim of the workshop was to engage national stakeholders and experts to identify barriers to effective coverage of SRMNH care, and to identify potential solutions to these barriers, by collecting qualitative data to inform the identification of success stories and future strategies to strengthen SRMNH care.

#### **Ethical approval**

Ethical approval was obtained from the research ethics committee at the University of Southampton. Particular attention was paid to methods of ensuring that participants were able to give informed consent to taking part in the workshops and that, having done so, steps were taken to avoid harm resulting from participation, e.g. by not making audio or video recordings, by asking participants to sign up to “Chatham House rules” and by giving participants the opportunity to view the workshop report before it was submitted to the research team. Those contributing to the self-completion questionnaire were asked to state whether or not they wanted their participation to be acknowledged in the final report.

#### **Data collection: self-completion questionnaire**

The questionnaire was developed through an iterative feedback process involving the core research team and members of the core group. Reference was made to international policy documents and agreed research and analysis frameworks. Information needs were balanced against the need to make the process manageable for respondents.

French and Spanish translations of the original English language questionnaire were also produced.

UNFPA and WHO distributed the self-completion questionnaire and the workshop guidance to their country representatives in each of the 75 countries, and nominated a lead technical midwifery/SRMNH advisor in each country as the focal point in each country. The focal points worked with personnel from ministries of health and education, professional associations, H4+ agencies and other relevant stakeholders to complete and validate the questionnaire. Each contributor was named in the completed questionnaire, with the option of requesting anonymity in the final report.

The questionnaire was also made available as an online tool, in English, French and Spanish, allowing respondents to enter their answers online and upload them directly to the analysis team. Once users submitted their responses, the system generated a PDF document displaying their answers, allowing contributors to check and validate the submitted data. A multi-lingual helpdesk was available to assist users throughout the process.

#### **Data collection: deliberative workshops**

The WHO and UNFPA focal points also coordinated with the ministries of health to convene and host the policy workshops. They were asked to invite up to 25 participants per workshop, with participants selected on the basis of their knowledge and expertise of midwifery/SRMNH services and their potential contribution to policy dialogue. In practice, participants included representatives of (amongst others): ministries of health, ministries of education, H4+ agencies, professional associations, civil society, academia, private sector, women’s and consumer groups and parliamentarians. A rapporteur was appointed for each workshop, with responsibility for taking detailed notes. Workshops were held under “Chatham House rules”, with participants asked not to attribute comments to individuals.

The country focal points were provided with a “facilitator’s handbook” for the workshops, which included written guidance, template invitations, participant consent forms and a reporting template.

#### **Data collection: secondary data**

Secondary data from published sources were collected on population, demographics, epidemiology and health service delivery to inform the modelling on effective coverage (see Annexes 3 and 4) and the mapping of subnational distributions of populations, women of reproductive age, pregnancies and live births (see Annex 6).

#### **Data analysis and reporting**

Members of the core group analysed the complete quantitative and qualitative dataset. Key subject areas analysed included: alignment between country cadre titles and ISCO classification; current policy environment; education; gap between designated and actual EmONC facilities; workforce availability and projections towards achieving UHC; strength of regulation and professional associations; broad perspectives; policy actions since 2011; salaries; workshop reports. A data analysis workshop was convened in Geneva in March 2014 for the Core Group to present and discuss their respective findings. These emergent findings informed the development of the report and its key messages.

## ANNEX 3: METHODOLOGY FOR MODELLING EFFECTIVE COVERAGE OF THE ESSENTIAL INTERVENTIONS FOR SEXUAL, REPRODUCTIVE, MATERNAL AND NEWBORN HEALTH CARE

“Health interventions cannot be carried out without health workers” [1]

Health workforce projections are a policymaking necessity [2]. Their purpose in this report, aligned with the WHO framework on health policy and systems research, is to provide “directional” and “correctional” scenarios [3] that can inform policy dialogue and decisions within countries on “what actions need to be taken in the near future to ensure movement towards achieving longer-term objectives” [2]. A key element of these actions is the requirement for further detailed analysis and investigation of the health workforce and health labour market to account for changing demographic, economic and health service contexts [4].

The methodology for modelling effective coverage of the 46 essential interventions for SRMNH care [5] builds upon published papers, tools and guidelines from the World Bank, WHO and others to inform needs-based workforce planning [4,6–15]. The result is a snapshot of “met need”, comparable across countries.

“Met need” is defined as: the percentage of a universal SRMNH benefits package that could potentially be obtained by women and newborns given the composition, competencies and available working time of the midwifery workforce\* The universal benefits package in this instance is, at minimum, the 46 essential interventions. The indicator is calculated as:

$$\frac{\text{Volume of essential SRMNH services that can be provided by the midwifery workforce (expressed in hours of work)}}{\text{Volume of essential SRMNH services required by women and newborns (expressed in hours of work)}} \times 100$$

The model — Effective Coverage Modelling (ECoMod) – is a tool to test scenarios and encourage multi-criteria decision-making [16,17] in workforce planning for Universal Health Coverage. For each of the 73 countries that contributed to this report, ECoMod was used to create baselines and projections, for each year between 2012 and 2030, of met need for the 46 essential interventions. The model uses self-reported data from countries (collected through the SoWMy 2014 survey), published secondary sources for population, demographics, epidemiology and health service delivery data, as described in Annex 4, and evidence-informed assumptions when countries reported missing data or “don’t know” (Annex 5). A full description is available in a separate Working Paper [18].

The model calculates:

1. The annual SRMNH workforce required to deliver universal coverage (100%) of the 46 essential interventions for SRMNH in relation to the needs of women and newborns;
2. The annual SRMNH workforce available and competent to deliver these interventions;
3. The annual SRMNH workforce deficit in relation to the requirement to meet women’s and newborns’ need for SRMNH services;
4. The impact of alternative scenarios and policy options to increase “met need”.

### 1. Estimating workforce requirements (2012-2030)

The mathematical model follows an *adjusted service targets-based* approach. The model is implemented using the following steps:

- a. Determining the package of SRMNH services that women and newborns need. This package is the set of 46 essential interventions which together cover the continuum of SRMNH care (pre-pregnancy, antenatal, childbirth and postnatal health care). These 46 interventions are recommended by the Partnership for Maternal Newborn and Child Health (PMNCH): they have an impact on reducing maternal, neonatal and child mortality; are suitable for delivery in low- and middle-income countries, and/or settings where minimal essential care is generally available; and are delivered through the health sector [5].
- b. Quantifying the annual volume of each health-care service required. The model estimates the total number of contacts, per year, to deliver each essential intervention to women and/or newborns based the assumption of universal coverage (100% of need). Universal coverage is estimated based on key demographic variables (e.g. number of women of reproductive age, number of pregnancies, number of live births, each with urban/rural and sub-national disaggregation, projected over time) and on available country-specific data on the incidence/prevalence of conditions associated with the essential interventions.
- c. Converting the annual volume of need into time and workload indicators of staffing requirements. Evidence-based estimates of the average time needed by a SRMNH worker to provide each essential intervention are available from the OneHealth tool [19]. When average time is multiplied by the total number of contacts and aggregated across the SRMNH continuum of care, it provides the total available working time (i.e. workforce requirement) needed to achieve universal coverage.

### 2. Estimating workforce availability (2012-2030)

Next, the model calculates, for the years 2012-2030, projections on the availability of the SRMNH workforce for comparison with the workforce requirements calculated in section 1. The model uses self-reported data from the SoWMy 2014 survey. In instances where a country responded “don’t know”, data were either identified from the WHO’s Global Health Observatory or defaulted to evidence-informed modelling assumptions. This is implemented in three steps:

- a. Determining the initial stock and age-distribution of each SRMNH cadre in the baseline year (2012). The SoWMy 2014 survey requested specific information on the composition, roles and age of the SRMNH workforce. These data were inputted into the model.
- b. Estimating the changes over time (2013-2030). The model adopts the standard workforce logic of “stock-and-flow” [4,20,21]. It includes an advanced mathematical simulation procedure to calculate, per year, the net number of workers (full-time equivalents, FTEs) who are actively engaged in

\* As defined in the glossary, and including associate midwifery/nursing personnel, midwifery/nursing personnel, clinical officers and medical assistants, physicians (generalists), and obstetricians/gynaecologists.

providing SRMNH care. The simulation accounts for the annual outflows (from voluntary attrition, mortality and retirement) and the annual inflows (from new graduates entering the workforce). Total FTEs available per cadre are then converted into total hours of available working time.

c. Assigning the total hours of available working time to the provision of essential interventions. WHO guidelines (OneHealth and Optimize for MNH [22]) provide evidence-informed analysis of the competencies and roles of the SRMNH workforce in relation to the essential interventions. These evidence-based guidelines do not reflect the diversity of task allocation across and within countries, but are appropriate for global projections. Roles for each cadre were allocated using a sequential marginal time allocation procedure:

1. The SRMNH cadres are categorized according to the essential interventions (1–46) based on the WHO guidelines for their role and competencies in an integrated health workforce (from community to primary and specialized cadres).
2. The annual working time available from each cadre category (starting at 1 and rising to 46) is allocated on a marginal basis to match the time requirements for the essential interventions that this cadre is authorized and competent to perform. This is done in blocks of 48 hours,\* starting with the first family planning intervention and finishing with the last postnatal intervention. This allocation procedure is iterative. Once the first round of time blocks is allocated, the time allocation starts again from the first intervention until either the working time requirements are met or the available working time from the cadre has been allocated.
3. The available working time from each of the other cadres is then allocated to match the remaining time requirements not met by the previous category. Crucially, each cadre's

available working time is allocated in increasing order of their roles and competencies. In practice, this means that although a GP could deliver family planning advice, the GP cadre's time will only be allocated to this intervention if the available working time from other cadres in previous categories (e.g. the midwife cadre) has already been "spent".

The procedure outlined above for allocating available working time is based on the economic principle of "productive efficiency" [23]. This economic principle is adopted within the Optimize 4 MNH guidelines, and encourages the distribution of tasks (interventions) across the integrated health workforce in relation to the cadre's education, licensing and competencies. Secondly the procedure assumes that no essential SRMNH intervention is prioritized for delivery: each intervention is afforded equal weighting.

### 3. Estimating the workforce surplus/deficit (2012-2030)

The third stage is a straightforward calculation. For each year between 2012 and 2030, the likely SRMNH workforce deficit in meeting women's and newborns' needs for SRMNH services is the difference between workforce requirements and the available working time.

### 4. Alternative scenarios and policy options

Finally, the model is designed to test scenarios and encourage multi-criteria decision-making in workforce planning for Universal Health Coverage. Four scenarios were developed to explore the impact of alternative policy options: 1) improved family planning to reduce the annual number of pregnancies and births; 2) the scale-up of graduate numbers to 2020; 3) efficiency gains in the existing workforce; and 4) a 50% reduction in voluntary attrition from the existing workforce. The impact of each scenario on the available working time and the resulting increase in met need is then calculated.

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\* Ideally, the marginal time allocation to the essential interventions should be done in blocks of 1 hour, but for computational efficiency a larger unit of time allocation (48 hours) was used (except for Brazil, China, India and Nigeria, where due to population size blocks of 480 hours were used).

## ANNEX 3: METHODOLOGY FOR MODELLING EFFECTIVE COVERAGE OF THE ESSENTIAL INTERVENTIONS FOR SEXUAL, REPRODUCTIVE, MATERNAL AND NEWBORN HEALTH CARE (continued)

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## ANNEX 4: ESTIMATING WOMEN'S AND NEWBORNS' NEED FOR THE 46 ESSENTIAL INTERVENTIONS

Essential intervention (SRMNH)	Need (defined as number of contacts with a health care worker by the population in need)	Data requirements and sources
<b>PRE-PREGNANCY</b>		
<b>1. Family planning advice</b>	All WRA (i.e. women aged 15-49), one contact per year.	<b>Indicator:</b> Number of WRA (2012-2030). <b>Source(s):</b> United Nations population database, medium fertility, 2012 revision (available from: <a href="http://esa.un.org/wpp/unpp/panel_indicators.htm">http://esa.un.org/wpp/unpp/panel_indicators.htm</a> ).
<b>2. Family planning methods – delivery</b>	All WRA who use one of the following contraception methods: condoms/ pills/ injectables/ IUD/ female sterilization. For each year y, need is defined for each method as follows: 1. Need for condoms (y) = WRA (y) x (CPR + unmet need) x condom method mix x 3. 2. Need for pills and injectables (y) = WRA (y) x (CPR + unmet need) x method mix (pills + injectables) x 3. 3. Need for IUD = [WRA (y) x (CPR + unmet need) x IUD method mix] / 5. 4. Need for female sterilization (y) = [WRA (y) – WRA (y-1)] x (CPR + unmet need) x sterilization method mix.	<b>Indicator:</b> CPR (latest available figure) <b>Source(s):</b> WHO Global Health Observatory (available from: <a href="http://apps.who.int/gho/data/node.main.531?lang=en">http://apps.who.int/gho/data/node.main.531?lang=en</a> ). <b>Indicator:</b> Unmet need for family planning. <b>Source(s):</b> United Nations Statistics Division, Millennium Development Goals Indicators (latest year available); WHO Global Health Observatory (latest year available) (available from <a href="http://unstats.un.org/UNSD/MDG/Data.aspx">http://unstats.un.org/UNSD/MDG/Data.aspx</a> ); DHS StatCompiler (available from: <a href="http://www.statcompiler.com/">http://www.statcompiler.com/</a> ); Partnership in Action 2012-2013 Report (available from: <a href="http://www.familyplanning2020.org/images/content/documents/FP2020_Partnership_in_Action_2012-2013.pdf">http://www.familyplanning2020.org/images/content/documents/FP2020_Partnership_in_Action_2012-2013.pdf</a> ); Angola, Botswana: Alkema L, Kantorova V, Menozzi C, Biddlecom A. National, regional, and global rates and trends in contraceptive prevalence and unmet need for family planning between 1990 and 2015: a systematic and comprehensive analysis. <i>Lancet</i> 2013; 381:1642–52. <b>Indicator:</b> Prevalence of contraceptive method mix. <b>Source(s):</b> Seiber E, Bertrand J, Sullivan T. Changes in contraceptive method mix in developing countries. <i>International Family Planning Perspectives</i> 2007; 33(3). (available from: <a href="http://www.guttmacher.org/pubs/journals/3311707.pdf">http://www.guttmacher.org/pubs/journals/3311707.pdf</a> ). <b>Note:</b> Information in this source for our purposes is only available for the following methods: IUD/ pill/ injectable/ condom/ female sterilization. Implants are apparently excluded from method mix because they account, across countries, for less than 1% of all contraception methods.
<b>3a. Prevention and management of STIs and HIV in all WRA: prevention of STIs and HIV</b>	All WRA, one contact per year.	<b>Indicator:</b> Number of WRA (2012-2030). <b>Source(s):</b> United Nations population database, 2012 revision (available from: <a href="http://esa.un.org/wpp/unpp/panel_indicators.htm">http://esa.un.org/wpp/unpp/panel_indicators.htm</a> ).
<b>3b. Prevention and management of STIs and HIV in all WRA: management of STIs</b>	All WRA with syphilis, gonorrhoea, chlamydia or trichomoniasis. For each year y, calculated as follows: 1. Need for management of syphilis (y) = WRA (y) x incidence of syphilis. 2. Need for management of gonorrhoea (y) = WRA (y) x incidence of gonorrhoea. 3. Need for management of chlamydia (y) = WRA (y) x incidence of chlamydia. 4. Need for management of trichomoniasis (y) = WRA (y) x incidence of trichomoniasis.	<b>Indicator:</b> Incidence of STIs in WRA. <b>Source(s):</b> WHO. Global incidence of selected curable sexually transmitted infections by region. Geneva: WHO, 2008 (available from: <a href="http://apps.who.int/iris/bitstream/10665/75181/1/9789241503839_eng.pdf?ua=1">http://apps.who.int/iris/bitstream/10665/75181/1/9789241503839_eng.pdf?ua=1</a> ).
<b>3c. Prevention and management of STIs and HIV in all WRA: management of HIV</b>	All WRA needing ART, calculated as follows: Number of WRA needing ART in 2012 / WRA in 2012 x WRA (y).	<b>Indicator:</b> % of WRA needing ART (number of adults needing ART x % of HIV positive adults who are women). <b>Source(s):</b> Number of adults needing ART (available from: <a href="http://www.unaids.org/en/data-analysis/datatools/aidsinfo/">http://www.unaids.org/en/data-analysis/datatools/aidsinfo/</a> ); some countries' individual sources; % of HIV positive adults who are women (number of female adults who are HIV positive / number of all adults who are HIV positive) from UNAIDS AIDSinfo database (available from: <a href="http://www.unaids.org/en/dataanalysis/datatools/aidsinfo/">http://www.unaids.org/en/dataanalysis/datatools/aidsinfo/</a> ); some countries' individual sources.
<b>4. Folic acid fortification/ supplementation</b>	All WRA, one contact per year.	
<b>PREGNANCY</b>		
<b>5. Iron and folic acid supplementation</b>	All PW, one contact per year.	
<b>6. Tetanus vaccination</b>	All PW, one contact per year.	
<b>7a. Prevention and management of malaria with insecticide-treated nets and antimalarials: prevention</b>	All PW living in areas of high malaria transmission, calculated as follows: Need for prevention of malaria (y) = PW (y) x % population in the country living in areas of high malaria transmission.	<b>Indicator:</b> % population living in high malaria transmission areas (number of people living in high risk areas (or if not available, used living in active foci)/total population). <b>Source(s):</b> WHO. Annex 6A of the World Malaria Report 2013. Geneva: WHO, 2013 (available from: <a href="http://www.who.int/malaria/publications/world_malaria_report_2013/en/">http://www.who.int/malaria/publications/world_malaria_report_2013/en/</a> ).

ANC=antenatal care; ART=antiretroviral therapy; CPR=contraceptive prevalence rate; IUD=intrauterine device; PMTCT=preventing mother to child transmission; pPROM=pre-term premature rupture of membranes; PW=pregnant women; STIs= sexually transmitted infections; WRA=women of reproductive age.

ESTIMATING WOMEN'S AND NEWBORNS' NEED FOR THE 46 ESSENTIAL INTERVENTIONS (continued)

Essential intervention (SRMNH)	Need (defined as number of contacts with a health care worker by the population in need)	Data requirements and sources
<b>PREGNANCY (continued)</b>		
<b>7b. Prevention and management of malaria with insecticide-treated nets and antimalarials: management</b>	All PW with presumed and confirmed malaria, calculated as follows: Need for malaria management (y) = PW (y) x incidence of presumed and confirmed malaria cases.	<b>Indicator:</b> Incidence of resumed and confirmed malaria cases in PW, (Number of presumed and confirmed malaria cases/Total United Nations population estimates). <b>Source(s):</b> WHO. Annex 6A of the World Malaria Report 2013. Geneva: WHO, 2013 (available from: <a href="http://www.who.int/malaria/publications/world_malaria_report_2013/en/">http://www.who.int/malaria/publications/world_malaria_report_2013/en/</a> ).
<b>8a. Prevention and management of STIs (as part of ANC): prevention of STIs and HIV</b>	All PW, one contact per year.	
<b>8b. Prevention and management of STIs (as part of ANC): management of STIs</b>	All PW with gonorrhoea, chlamydia or trichomoniasis (note syphilis is addressed separately below). For each year y, calculated as follows: 1. Need for management of gonorrhoea (y) = PW (y) x incidence of gonorrhoea. 2. Need for management of chlamydia (y) = PW (y) x incidence of chlamydia. 3. Need for management of trichomoniasis (y) = PW(y) x incidence of trichomoniasis.	<b>Indicator:</b> Incidence of STIs in PW. <b>Sources(s):</b> WHO. Global incidence of selected curable sexually transmitted infections by region. Geneva: WHO, 2008. (available from: <a href="http://apps.who.int/iris/bitstream/10665/75181/1/9789241503839_eng.pdf?ua=1">http://apps.who.int/iris/bitstream/10665/75181/1/9789241503839_eng.pdf?ua=1</a> ).
<b>8c. Prevention and management of STIs (as part of ANC): management of HIV</b>	All PW needing ART to avoid mother-to-child transmission, calculated as follows: Need for management of HIV (y) = % (number of pregnant women needing ART for PMTCT in 2012/ PW in 2012) x PW (y).	<b>Indicator:</b> % of HIV positive PW needing effective ART for PMTCT. <b>Source(s):</b> For Africa: USAID AIDSinfo (available from: <a href="http://www.unaids.org/en/data-analysis/datatools/aidsinfo/">http://www.unaids.org/en/data-analysis/datatools/aidsinfo/</a> ); For other regions: UNAIDS. Global Report: UNAIDS report on the global AIDS epidemic 2013. (available from: <a href="http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2013/gr2013/UNAIDS_Global_Report_2013_en.pdf">http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2013/gr2013/UNAIDS_Global_Report_2013_en.pdf</a> ); Some countries' individual sources. <b>Note:</b> Where value is <500 or <1000, 500 and 1000 values were assumed, respectively; where value is not available for country, the following data were used: HIV positive PW needing ART for PMTCT {region} x (HIV infected females {country}/ HIV infected females {region}).
<b>9. Calcium supplementation to prevent hypertension</b>	All PW, one contact per year.	
<b>10. Interventions for cessation of smoking</b>	All PW who smoke, calculated as follows: Need for smoking cessation interventions (y) = PW x prevalence of smoking in women aged over 15 years.	<b>Indicators:</b> Current smoking of any tobacco product (age-standardized rate), all females <b>Source(s):</b> WHO Global Health Observatory (available from: <a href="http://apps.who.int/gho/data/node.main.1250?lang=en">http://apps.who.int/gho/data/node.main.1250?lang=en</a> ). <b>Note:</b> If no data were found for a particular country, used WHO regional average for the countries in the dataset.
<b>11a. Screening for and treatment of syphilis: screening</b>	All PW, one contact per year.	
<b>11b. Screening for and treatment of syphilis: treatment</b>	All PW with syphilis. For each year y, calculated as follows: 1. Need for management of syphilis (y) = PW (y) x incidence of syphilis.	<b>Indicator:</b> Incidence of syphilis in PW. <b>Sources(s):</b> WHO. Global incidence of selected curable sexually transmitted infections by region. Geneva: WHO, 2008 (available from: <a href="http://apps.who.int/iris/bitstream/10665/75181/1/9789241503839_eng.pdf?ua=1">http://apps.who.int/iris/bitstream/10665/75181/1/9789241503839_eng.pdf?ua=1</a> ).
<b>12+13: Antihypertensive drugs to treat high blood pressure (including low-dose aspirin to prevent pre-eclampsia)</b>	All PW with raised blood pressure and all PW with pre-eclampsia, calculated as follows: Need for antihypertensive drugs (y) = [WRA x (incidence of pre-eclampsia)] + [live births x (incidence of pre-eclampsia)].	<b>Indicator:</b> Incidence of high blood pressure and pre-eclampsia in PW. <b>Source(s):</b> Dolea C, AbouZahr C. Global burden of hypertensive disorders of pregnancy in the year 2000. Evidence and Information for Policy. Geneva: WHO, 2003 (available from: <a href="http://www.who.int/healthinfo/statistics/bod_hypertensivedisordersofpregnancy.pdf">http://www.who.int/healthinfo/statistics/bod_hypertensivedisordersofpregnancy.pdf</a> ). <b>Note:</b> Only half of all hypertensive disorders presented in Table 6.1 in the reference paper were considered for the analysis.
<b>14. Magnesium sulphate for eclampsia</b>	All PW with eclampsia and pre-eclampsia, calculated as follows: Need for magnesium sulphate (y) = live births x (incidence of eclampsia + incidence of pre-eclampsia).	<b>Indicator:</b> Incidence of pre-eclampsia and eclampsia in PW. <b>Source(s):</b> Dolea C, AbouZahr C. Global burden of hypertensive disorders of pregnancy in the year 2000. Evidence and Information for Policy. Geneva: WHO, 2003 (available from: <a href="http://www.who.int/healthinfo/statistics/bod_hypertensivedisordersofpregnancy.pdf">http://www.who.int/healthinfo/statistics/bod_hypertensivedisordersofpregnancy.pdf</a> ); Regional rates used according to WHO regions. <b>Note:</b> Total eclampsia incidence rates calculated as percentage of pre-eclampsia. Regional rates by WHO regions.

(continued)

ESTIMATING WOMEN'S AND NEWBORNS' NEED FOR THE 46 ESSENTIAL INTERVENTIONS (continued)

Essential intervention (SRMNH)	Need (defined as number of contacts with a health care worker by the population in need)	Data requirements and sources
<b>PREGNANCY (continued)</b>		
<b>15. Antibiotics for pre-term premature rupture of membranes (pPROM)</b>	All cases of pPROM, calculated as follows: Need for antibiotics for pPROM (y) = all births including stillbirths (y) x incidence of pPROM.	<b>Indicator:</b> Incidence of pPROM <b>Source(s):</b> WHO global survey on maternal and perinatal health, 2005 (available from: <a href="http://www.who.int/reproductivehealth/topics/best_practices/GS_Tabulation.pdf?ua=1">http://www.who.int/reproductivehealth/topics/best_practices/GS_Tabulation.pdf?ua=1</a> ). <b>Note:</b> Where country rate not available used regional rate; where regional rate not available used world total rate.
<b>16. Corticosteroids to prevent respiratory distress</b>	All preterm births (including stillbirths), calculated as: Need for corticosteroids (y) = all births, including stillbirths (y) x preterm birth rate.	<b>Indicators:</b> Prevalence of preterm births. <b>Source(s):</b> Healthy Newborn Network. Global and national newborn health data and indicators (available from: <a href="http://www.healthynetwork.org/resource/database-global-and-national-newborn-health-data-and-indicators">http://www.healthynetwork.org/resource/database-global-and-national-newborn-health-data-and-indicators</a> ).
<b>17. Safe abortion</b>	All safe abortions, calculated as follows: Need for safe abortions (y) = WRA (y) x rate of safe abortions.	<b>Indicator:</b> Rate of safe abortions. <b>Source(s):</b> Sedgh G, Singh S, Shah IH, et al. Induced abortion: incidence and trends worldwide from 1995 to 2008. <i>Lancet</i> 2012; 379:625–32 (available from: <a href="http://www.thelancet.com/journals/lancet/article/PIIS0140673611617868/table?tableid=tbl2&amp;tableidtype=table_id&amp;sectionType=red">http://www.thelancet.com/journals/lancet/article/PIIS0140673611617868/table?tableid=tbl2&amp;tableidtype=table_id&amp;sectionType=red</a> ). <b>Note:</b> Where the value was <0.5 used 0.5.
<b>18. Post-abortion care</b>	All unsafe abortions, calculated as follows: Need for post-abortion care (y) = WRA(y) x rate of unsafe abortions.	<b>Indicator:</b> Rate of unsafe abortions. <b>Source(s):</b> Sedgh G, Singh S, Shah IH, et al. Induced abortion: incidence and trends worldwide from 1995 to 2008. <i>Lancet</i> 2012; 379:625–32 (available from: <a href="http://www.thelancet.com/journals/lancet/article/PIIS0140673611617868/table?tableid=tbl2&amp;tableidtype=table_id&amp;sectionType=red">http://www.thelancet.com/journals/lancet/article/PIIS0140673611617868/table?tableid=tbl2&amp;tableidtype=table_id&amp;sectionType=red</a> ). <b>Note:</b> Where the value was <0.5 used 0.5.
<b>19. Reduce malpresentation at birth with external cephalic version</b>	All breech births (including stillbirths), calculated as follows: Need for external cephalic version (y) = all births, including stillbirths (y) x incidence of breech births (including stillbirths).	<b>Indicator:</b> Incidence of breech presentations. <b>Source(s):</b> WHO. Global survey on maternal and perinatal health. Statistics on breech presentations, 2005 (available from: <a href="http://www.who.int/reproductivehealth/topics/best_practices/GS_Tabulation.pdf?ua=1">http://www.who.int/reproductivehealth/topics/best_practices/GS_Tabulation.pdf?ua=1</a> ). <b>Note:</b> Where country rate not available used regional rate; where regional rate not available used world total rate.
<b>20. Induction of labour to manage pre-labour rupture of membranes at term</b>	All cases of pPROM, calculated as follows: Need for antibiotics for pPROM (y) = all births, including stillbirths (y) x incidence of pPROM.	<b>Indicator:</b> Incidence of pPROM. <b>Source(s):</b> WHO. Global survey on maternal and perinatal health. Statistics on breech presentations, 2005 (available from: <a href="http://www.who.int/reproductivehealth/topics/best_practices/GS_Tabulation.pdf?ua=1">http://www.who.int/reproductivehealth/topics/best_practices/GS_Tabulation.pdf?ua=1</a> ).
<b>CHILDBIRTH</b>		
<b>23. Normal labour and delivery management and social support during childbirth</b>	All births (including stillbirths), one contact.	
<b>21+22+24. Active management of third stage of labour (to deliver placenta) to prevent post-partum haemorrhage (including uterine massage, uterotonics and cord traction)</b>	All births (including stillbirths), one contact.	
<b>26a. Screen and manage HIV during childbirth – screen if not already tested</b>	All births (including stillbirths) except in those cases when there have been 4 ANC visits, calculated as follows: Need for screening for HIV during childbirth (y) = all births including stillbirths (y) x (1 - % of cases with 4 ANC visits).	<b>Indicator:</b> % of antenatal care coverage (4 visits). <b>Source(s):</b> United Nations Statistics Division. The official United Nations site for the MDG indicators (available from: <a href="http://mdgs.un.org/unsd/mdg/Default.aspx">http://mdgs.un.org/unsd/mdg/Default.aspx</a> ).
<b>26b. Screen and manage HIV during childbirth – treat</b>	All births (including stillbirths) of HIV positive women who have not had 4 ANC visits, calculated as follows: Need for screening for HIV during childbirth (y) = all births, including stillbirths (y) x (% of cases without 4 ANC visits) x % HIV prevalence in all adults.	<b>Indicator:</b> % of antenatal care coverage (4 visits) of HIV positive women. <b>Source(s):</b> United Nations Statistics Division. The official United Nations site for the MDG indicators (available from: <a href="http://mdgs.un.org/unsd/mdg/Default.aspx">http://mdgs.un.org/unsd/mdg/Default.aspx</a> ); UNAIDS AIDSinfo (available from: <a href="http://www.unaids.org/en/dataanalysis/datatools/aidsinfo/">http://www.unaids.org/en/dataanalysis/datatools/aidsinfo/</a> ); some countries from individual sources.
<b>27+28. C-section for maternal/foetal indication (including prophylactic antibiotics for c-section)</b>	All births, including stillbirths, which require c-section, calculated as follows: Need for c-section (y) = all births, including stillbirths (y) x fixed assumption on need for a c-section.	<b>Note:</b> Assumption = 0.05 x all births (including stillbirths).

## ESTIMATING WOMEN'S AND NEWBORNS' NEED FOR THE 46 ESSENTIAL INTERVENTIONS (continued)

Essential intervention (SRMNH)	Need (defined as number of contacts with a health care worker by the population in need)	Data requirements and sources
<b>CHILDBIRTH (continued)</b>		
<b>29. Induction of labour for prolonged pregnancy (midwife or nurse)</b>	All births including stillbirths that occur after 41 weeks, calculated as follows: Need for induction of labour (y) = pregnancies (y) x % of pregnancies which go beyond 41 weeks.	<b>Indicator:</b> % pregnancies terminated after 42 weeks. <b>Source(s):</b> OneHealth Model: Interventions treatment assumptions, 2013 (available from: <a href="http://futuresinstitute.org/Download/Spectrum/Manuals/Intervention%20Assumptions%202013%209%2028.pdf">http://futuresinstitute.org/Download/Spectrum/Manuals/Intervention%20Assumptions%202013%209%2028.pdf</a> ). <b>Note:</b> Assumption = 0.05 x pregnancies.
<b>30+25. Management of post-partum haemorrhage (manual removal of placenta and/or surgical procedures and/or oxytocics)</b>	All births, including stillbirths, where there is post-partum haemorrhage, calculated as follows: Need for management of post-partum haemorrhage (y) = WRA (y) x incidence of post-partum haemorrhage (per 1000 women aged 15-49).	<b>Indicator:</b> Incidence of post-partum haemorrhage cases. <b>Source(s):</b> Dolea C, AbouZahr C, Stein C. Global burden of maternal haemorrhage in the year 2000. Evidence and information for policy. Geneva: WHO, 2003 (available from: <a href="http://www.who.int/healthinfo/statistics/bod_maternalhaemorrhage.pdf">http://www.who.int/healthinfo/statistics/bod_maternalhaemorrhage.pdf</a> ).
<b>POSTNATAL CARE</b>		
<b>31-34 and 36-38. Postnatal preventive care</b>	All births (including stillbirths), 4 contacts.	
<b>35. Detect and treat post-partum sepsis (PPS)</b>	All cases of post-partum sepsis, calculated as follows: Need for detecting and treating post-partum sepsis (y) = WRA (y) x incidence of post-partum sepsis per 1000 WRA.	<b>Indicator:</b> Incidence of post-partum sepsis. <b>Source(s):</b> Dolea C, AbouZahr C, Stein C. Global burden of maternal sepsis in the year 2000. Evidence and information for policy. Geneva: WHO, 2003 (available from: <a href="http://www.who.int/healthinfo/statistics/bod_maternalsepsis.pdf">http://www.who.int/healthinfo/statistics/bod_maternalsepsis.pdf</a> ).
<b>39. Neonatal resuscitation with bag and mask</b>	All newborns requiring resuscitation, calculated as follows: Need for neonatal resuscitation (y) = live births (y) x 0.01.	<b>Indicator:</b> % of newborns requiring resuscitation. <b>Source(s):</b> OneHealth Model: Interventions treatment assumptions, 2013 (available from: <a href="http://futuresinstitute.org/Download/Spectrum/Manuals/Intervention%20Assumptions%202013%209%2028.pdf">http://futuresinstitute.org/Download/Spectrum/Manuals/Intervention%20Assumptions%202013%209%2028.pdf</a> ). <b>Note:</b> around 1% of newborns require resuscitation
<b>40. Kangaroo mother care</b>	All newborns with low birth weight, calculated as follows: Need for kangaroo mother care (y) = live births (y) x % of newborns with low birth weight.	<b>Indicator:</b> % of newborns with low birth weight. <b>Source(s):</b> UNICEF and WHO. Low birth weight: country, regional and global estimates. New York: UNICEF, 2004 (available from: <a href="http://www.unicef.org/publications/files/low_birthweight_from_EY.pdf">http://www.unicef.org/publications/files/low_birthweight_from_EY.pdf</a> ).
<b>41. Extra support for feeding small and preterm babies</b>	All preterm births (including stillbirths), calculated as follows: Need for extra feeding support (y) = all births including stillbirths (y) x preterm birth rate.	<b>Indicators:</b> % of preterm birth. <b>Source(s):</b> Healthy Newborn Network. Global and national newborn health data and indicators. (available from: <a href="http://www.healthynewbornnetwork.org/resource/database-global-and-national-newborn-health-data-and-indicators">http://www.healthynewbornnetwork.org/resource/database-global-and-national-newborn-health-data-and-indicators</a> ).
<b>42. Management of newborns with jaundice</b>	All newborns with jaundice, calculated as follows: Need for management of jaundice (y) = live births (y) x % of newborns with jaundice requiring phototherapy.	<b>Indicator:</b> % of newborns with jaundice. <b>Source(s):</b> Teune MJ, Bakhuizen S, Gyamfi Bannerman C, et al. A systematic review of severe morbidity in infants born late preterm. <i>Am J Obstet Gynecol</i> 2011; 205:374.e1-9. <b>Note:</b> Uniform assumption. Sum of incidence in late preterm infants (1245/26,252) and in full-term infants (2033/150,700).
<b>43. Initiate prophylactic ART for babies exposed to HIV</b>	All births, including stillbirths (except when there have been 4 ANC visits) in women who are HIV positive, calculated as follows: Need for prophylactic ART (y) = all births including stillbirths (y) x (1 - % of cases with 4 ANC visits) x % HIV positive adults.	<b>Indicator:</b> % of newborns, born from a HIV positive woman, who received prophylactic ART. <b>Source(s):</b> United Nations Statistics Division. The official United Nations site for the MDG indicators (available from: <a href="http://mdgs.un.org/unsd/mdg/Default.aspx">http://mdgs.un.org/unsd/mdg/Default.aspx</a> ); UNAIDS AIDSinfo (available from: <a href="http://www.unaids.org/en/dataanalysis/datatools/aidsinfo/">http://www.unaids.org/en/dataanalysis/datatools/aidsinfo/</a> ).
<b>44. Presumptive antibiotic therapy for newborns at risk of bacterial infections</b>	All newborns at risk of bacterial infection, calculated as follows: Need for presumptive antibiotic therapy (y) = live births (y) x incidence of bacterial infection in newborns.	<b>Indicator:</b> Incidence of bacterial infection in newborns. <b>Source(s):</b> Singh S, Darroch JE, Ashford LS. Adding it up: the need for and cost of maternal and newborn care – estimates for 2012. Guttmacher Institute, 2013 (available from: <a href="http://www.guttmacher.org/pubs/AIU-MNH-2012-estimates.pdf">http://www.guttmacher.org/pubs/AIU-MNH-2012-estimates.pdf</a> ). <b>Note:</b> Uniform assumption of 20%.
<b>45. Surfactant to prevent respiratory distress syndrome in preterm babies</b>	All preterm births (including stillbirths), calculated as follows: Need for surfactant (y) = live births (y) x preterm birth rate.	<b>Indicator:</b> % of preterm births. <b>Source(s):</b> UNICEF and WHO. Low birth weight: country, regional and global estimates. New York: UNICEF, 2004 (available from: <a href="http://www.unicef.org/publications/files/low_birthweight_from_EY.pdf">http://www.unicef.org/publications/files/low_birthweight_from_EY.pdf</a> ).
<b>46. Continuous positive airway pressure (CPAP) to manage babies with respiratory distress syndrome (RDS)</b>	All newborns with respiratory distress syndrome, calculated as follows: Need for surfactant(y) = live births (y) x incidence of respiratory distress syndrome in newborns.	<b>Indicator:</b> Incidence of respiratory distress syndrome in newborns. <b>Source(s):</b> Rodriguez RJ, Martin RJ, Fanaroff AA. Respiratory distress syndrome and its management – Chapter 19. In Fanaroff AA, Martin RJ. Neonatal-perinatal medicine: diseases of the fetus and infant. St Louis: Mosby, 2010. (available from <a href="http://www.thoracic.org/education/breathing-in-america/resources/chapter-19-respiratory-distress-syndr.pdf">http://www.thoracic.org/education/breathing-in-america/resources/chapter-19-respiratory-distress-syndr.pdf</a> ). <b>Note:</b> Uniform assumption of 1%



## ANNEX 5. DECISION RULES

The 73 SoWMy countries provided new information on the midwifery workforce by: cadre, ISCO classification, number, age distribution, % time spent on MNH services, annual attrition (voluntary), retirement age, graduates and enrolments, years of education, and student attrition from education.

The values for each of these indicators informed the modelled projections of workforce availability in relation to women's and newborn need for the 46 essential SRMNH interventions.

In the case of missing or inconsistent data, the model applied a fixed set of decision rules, listed below.

Indicator used in the modelled projections	Example value	Decision rule (for missing or inconsistent data)
<b>Country</b>	A.N. Other	n/a
<b>Name of cadre</b>	Midwife	Apply the name of the category under which the country cadre was listed.
<b>International Standard Classification of Occupation (ISCO) code</b>	Code 2222	Assigned based on the roles and responsibilities specified, in the context of the cadre category selected.
<b>Number of workers</b>	1,515	Default to WHO Global Health Observatory (2014 version). If not in WHO Global Health Observatory, secondary source from government policy document. If neither, zero.
<b>Age distribution</b>	Aged under 30: 300 workers Aged 30-39: 510 workers Aged 40-49: 424 workers Aged over 50: 281 workers	Apply an equal distribution of the total number of workers across age groups.
<b>% time spent on MNH</b>	100%	Apply the sample median, across all countries, for that ISCO code: –2222 (midwifery professionals): 100% –2221 (nursing professionals): 85% –3222 (midwifery professionals, associates): 100% –3221 (nursing professionals, associates): 55% –2211 (medical practitioners, generalists): 30% –2212 (medical practitioners, specialists ob/gyn): 100% –2240 or 3256 (paramedical practitioners and medical assistants): 75%
<b>Annual workforce attrition (voluntary)</b>	10%	Apply 4% for all cadres.
<b>Retirement age</b>	62 years	Apply the retirement age of any cadre in the same country with the same ISCO code. If the former not available, retirement age of any other cadre in the same country, regardless of ISCO code. If retirement age not available for any cadre, default to 65.
<b>Graduates in 2012</b>	43 graduates	Apply 5% of the total number of workers in 2012, equivalent to a stable replacement rate of workforce turnover.
<b>Enrolments each year from 2010 to 2015</b>	2010: 52 students 2011: 50 students 2012: 54 students 2013: 48 students 2014: 55 students 2015: 60 students	Default to the last available enrolment figure from previous years. If not available, assume enrolment is equal to graduates from 2012.
<b>Years of education</b>	3 years	Apply the given years of education of any cadre with the same ISCO code in the same country. If former not available, assign the sample median, across all countries, for that ISCO code: –2222 (midwifery professionals): 3 years –2221 (nursing professionals): 3 years –3222 (midwifery professionals, associates): 2 years –3221 (nursing professionals, associates): 2 years –2211 (medical practitioners, generalists): 7 years –2212 (medical practitioners, specialists ob/gyn): 10 years –2240 or 3256 (paramedical practitioners and medical assistants): 3 years
<b>Student attrition from education</b>	20%	Apply student attrition from education for any cadre with the same ISCO code in the same country. If the former not available, assign the sample median, across all countries, for that ISCO code.

## ANNEX 6. MAPPING OF SUBNATIONAL DISTRIBUTIONS OF POPULATIONS, WOMEN OF REPRODUCTIVE AGE, PREGNANCIES AND LIVE BIRTHS

The mapping methodology used in this report was developed and published by a group of partners (University of Southampton, ICS Integrare, USAID, Norad, UNFPA, WHO) working on the State of the Art in Mapping for MNH [1]. It includes new, innovative approaches to make the geography of MNH informative for policy and planning at country level. In particular, this report utilizes the increasing capacity of geographic information systems (GIS) to map women of reproductive age (WRA), pregnancies and live births [2]. The methodology follows a simple four-step process to disaggregate and estimate distributions of populations, WRA, pregnancies and live births by subnational boundaries. Each of the four steps is described below.

### 1. Construction of detailed and contemporary population distribution datasets

Construction of estimates of population distribution for Africa and Asia at approximately 100 metre spatial resolution has recently been completed (full details are available at [www.worldpop.org.uk](http://www.worldpop.org.uk)) [3-8]. Briefly, a GIS-linked database of census and official population estimate data was constructed, targeting the most recent and spatially detailed datasets available, given their importance in producing accurate mapping. Detailed 30 metre spatial resolution maps of settlement extents were derived from Landsat satellite imagery through either semi-automated classification approaches [6-8] or expert opinion-based analyses. These settlement maps were then used to refine land cover data. Local census data mapped at fine resolution by enumeration area level from sample countries across Africa and Asia were exploited to identify typical regional per-land cover class population densities. These were then applied to redistribute census counts by regional ecozones to map human population distributions at approximately 100 metre spatial resolution continent-wide. Where available, additional country-specific datasets providing valuable data on population distributions, not captured by censuses, such as internally displaced people or detailed national surveys, were incorporated into the mapping process. Population datasets for the Americas were being constructed at the time of analysis, and therefore population datasets from the Global Rural Urban Mapping Project (GRUMP) [9] were used for countries in the Americas.

### 2. Construction of future projection population distribution datasets

United Nations estimates of urban- and rural-specific growth rates [10] were compiled for all 73 countries participating in this report. These were applied to the datasets described above. For populations mapped as living within urban areas, as defined by Columbia University's Global Rural Urban Mapping Project urban extent map [9] the urban growth rates were applied. For all other

populations the rural growth rates were applied. This approach was used to construct 2010, 2012, 2015, 2020, 2025 and 2030 population distribution datasets, which were adjusted to ensure that national population totals matched those estimated by the United Nations.

### 3. Construction of WRA distribution datasets

Following previously published methods [11], data on subnational population compositions were obtained from a variety of sources for as many countries as possible, principally from contemporary census-based counts broken down at a fine resolution administrative unit level. These were matched to corresponding GIS datasets showing the boundaries of each unit, and used to adjust the existing spatial population datasets described above to produce estimates of the distributions of populations by sex and 5-year age group. The datasets were then adjusted to ensure that national population totals by age group, specific city totals and urban/rural totals matched those reported by the United Nations [12]. A summation of the datasets representing females in the 15-49 year age groups was undertaken to produce WRA datasets.

### 4. Mapping pregnancies and live births

Following the previously published approach [2], in 73 countries, age-specific fertility rates by 5-year age groupings, disaggregated by subnational regions and urban versus rural, were derived from the most recent national household surveys conducted as part of the Demographic and Household Survey (DHS) programme ([www.measuredhs.com](http://www.measuredhs.com)). GIS datasets representing the boundaries of the subregions (<http://spatialdata.dhsprogram.com/>) and the urban extents within them were assembled [9], and the age-specific fertility rates were matched to these boundaries. These rates were then used to adjust each 5-year age grouped female population distribution dataset described above to produce gridded estimates of the distributions of live births across each country. At the national level, these totals were then adjusted linearly to ensure that their totals matched those estimated by the United Nations for the 2010-2030 period [12] to create the different year datasets. For countries where no recent DHS data existed (n= 25) the population datasets described above were simply adjusted to ensure that their totals matched those of the United Nations estimates. To convert the gridded datasets of numbers of live births to numbers of pregnancies, national level estimates of numbers of pregnancies in 2012 were obtained from the Guttmacher Institute ([www.guttmacher.org](http://www.guttmacher.org)) and the 2012 birth dataset totals were adjusted nationally to match these totals. For the other years, it was assumed that the national-level ratios between numbers of births and pregnancies in 2012 remained constant, and these country-specific ratios were used to convert each live birth dataset to a pregnancy dataset.

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## ANNEX 7. TASKS WITHIN THE SCOPE OF MIDWIFERY PROFESSIONALS ACCORDING TO THE INTERNATIONAL STANDARD CLASSIFICATION OF OCCUPATIONS

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The tasks for midwifery professionals are divided into eight categories as follows:

1. planning, providing and evaluating care and support services for women and babies before, during and after pregnancy and childbirth according to the practice and standards of modern midwifery care;
2. providing advice to women and families and conducting community education on health, nutrition, hygiene, exercise, birth and emergency plans, breastfeeding, newborn care, family planning and contraception, lifestyle and other topics related to pregnancy and childbirth;
3. assessing progress during pregnancy and childbirth, managing complications and recognizing warning signs requiring referral to a medical doctor with specialized skills in obstetrics;
4. monitoring the health status of newborns managing complications and recognizing warning signs requiring referral to a medical doctor with specialized skills in neonatology;
5. monitoring pain and discomfort experienced by women during labour and delivery and alleviating pain using a variety of therapies, including pain-killing drugs;
6. reporting births to government authorities to meet legal and professional requirements;
7. conducting research on midwifery practices and procedures and disseminating findings e.g. through scientific papers and reports;
8. planning and conducting midwifery education activities in clinical and community settings.

Source: ILO. ISCO-08 group definitions. Final draft. International Labour Organization. Available from: <http://www.ilo.org/public/english/bureau/stat/isco/isco08/index.htm> (accessed April 24, 2014).

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