



# A HealthTech Report

## Trip Report:

### Dissemination of a Willingness to Pay Assessment for Oxytocin in the Uniject™ Injection System Among Private Midwives in Indonesia

August 22–25, 2011

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# **Trip Report: Dissemination of a Willingness to Pay Assessment for Oxytocin in the Uniject™\* Injection System Among Private Midwives in Indonesia**

## **Submitted by:**

Steve Brooke, Commercialization Advisor  
Kristina Lorenson, Commercialization Officer

## **Funder:**

USAID field support from the Indonesia Mission, through the HealthTech Program at PATH

## **Project Title:**

Developing an Evidence Base for Introducing Oxytocin in Uniject™ in Indonesia

## **Visit to:**

Jakarta, Indonesia

## **Inclusive Travel Dates:**

From: August 22, 2011  
To: August 25, 2011

## **Purpose/Objective of Travel**

The purpose of the trip to Indonesia was three-fold: 1) dissemination of the willingness to pay assessment for oxytocin in Uniject™ in Indonesia; 2) follow-up with National Institute of Health Research and Development (NIHRD) on the assessment of the quality of oxytocin in ampoules; 3) meeting with Kalbe Farma on potential development of oxytocin in Uniject.

## **Summary of Activities, Findings, and Next Steps**

### **Meeting with NIHRD, 22 August 2011**

Participants included: Dr. Trihono (Director General of NIHRD), Ms. Idri Rooslamati (NIHRD Technician), Mr. Steve Brooke (PATH Commercialization Advisor), Dr. Iwan Aiwaran (PATH Consultant)

- Dr. Trihono explained that due to the sensitive nature of any testing of pharmaceutical products, the Ministry of Health (MOH) has made a decision to keep the specific results of the oxytocin quality testing confidential.
- We discussed the need to inform our donor, the USAID Indonesia Mission, of the confidential results of the study. Dr. Trihono explained that additional technical follow-up was now being conducted by Badan Pengawas Obat dan Makanan (BPOM/National Agency of Drug and Food Control of Indonesia), and that once this was completed, NIHRD, BPOM, the Ministry of Health of Indonesia (MOH), United States Agency for International Development (USAID), PATH, and the Maternal, Child and Health Integrated Program (MCHIP) Indonesia could have a private meeting to discuss the results and follow-up actions.
- Dr. Trihono said that NIHRD is quite pleased with collaboration of USP and PATH and really appreciates the support and technical assistance that has come through this

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\* Uniject is a trademark of BD.

project. Prior to this project, neither the NIHRD nor BPOM, the Indonesian drug regulatory authority, had been trained in the newer high-performance liquid chromatography (HPLC) techniques for measuring potency of oxytocin, and that this alone was of significant benefit.

- Dr. Trihono confirmed that NIHRD will work with USP and PATH to complete the confidential detailed technical study report, and will advise PATH and others when the BPOM follow-up activities were completed.
- Mr. Brooke noted that PATH's funding for its work on this activity will be completed at the end of this month (September), so PATH's ability to participate in the private results discussion meeting will depend on both the timing of the meeting and available funding.

### **Meeting with USAID Indonesia Mission, 22 August 2011**

Participants included: Ms. Irene Koek (USAID Indonesia, Director, Office of Health), Ms. Mildred Panthouw (USAID Indonesia, MCH Project Management Specialist), Ms. Rachel Cintron (USAID Indonesia, Deputy Director Office of Health), Dr. Masee Bateman (USAID Indonesia, Sr. Health Advisor), Toni Tomasek (USAID Indonesia, Health and Nutrition Officer), Ms. Anne Hyre (MCHIP Chief of Party), Ms. Kristina Lorenson (PATH Commercialization Officer)

Ms. Lorenson conveyed that the oxytocin quality assessment was completed, and that Mr. Brooke was meeting with NIHRD to discuss next steps with the BPOM and the MOH.

Ms. Lorenson also provided a brief update on Kalbe Farma's reluctance to make the significant investment necessary to make its oxytocin in Uniject available in Indonesia. Initial feedback from Becton Dickenson (BD) indicated that Kalbe originally considered a portfolio of products for Uniject; however, when they determined that it was not technically feasible for one of the high-margin products to be filled in Uniject, their business strategy shifted away from Uniject. Ms. Lorenson informed USAID that she and Steve would be meeting with Kalbe Farma on 24 August to discuss the willingness to pay results and further explore their business strategies around oxytocin in Uniject.

Ms. Lorenson provided an overview of the results from the willingness to pay for oxytocin in Uniject among private midwives study. The PowerPoint presentation, including the results of the study, is attached to this document in Appendix 1. Several discussion points emerged from the meeting:

- Rationale for selection of the study participants—private midwives in and around Jakarta and Bandung—was discussed. Density of private midwives with high client volumes and a potentially higher-paying customer base than in rural areas of Indonesia presented a better representative target market for an oxytocin manufacturer. This was also pointed out as a limitation, as the study primarily represented the East Java, urban, private midwives' viewpoint.
- USAID recommended we clearly state that there is not currently a manufacturer positioned to introduce oxytocin in Uniject. The results of this willingness to pay study will be leveraged in future discussions with manufacturers to encourage them to consider differentiating their product to meet the perceived demand from private

midwives. It was suggested that we consider speaking with Dewi Rattari of FHI-360 regarding interactions with Indonesian oxytocin manufacturers.

- Despite the evidence from the study that 69% of private midwives reported a willingness to choose oxytocin in Uniject over the most expensive product on the market at the same price, there is no guarantee that a manufacturer would be profitable, given the potentially small margins on a generic pharmaceutical product. It should be mentioned that a manufacturer would likely require a portfolio of products be considered for Uniject, some with significantly higher price points than oxytocin, in order for packaging in this device to be economically feasible.
- There was a comment that it would have been interesting to inquire about which midwives practiced in both private and public settings. This information was provided by a handful of midwives, but the question was not asked directly of them during the interview. In addition, information on whether births occurred in the home or in a clinic environment would have been interesting information to gather. Unfortunately, this specific question was not asked.

### **Meeting with USAID Indonesia Mission, IBI and MCHIP, 23 August 2011**

Participants included: Dr. Masee Bateman (USAID Indonesia, Sr. Health Advisor), Rachel Cintron (USAID Indonesia, Deputy Director Office of Health), Ms. Anne Hyre (MCHIP Chief of Party), Mr. Steve Brooke (Commercialization Advisor), Ms. Kristina Lorensen (PATH Commercialization Officer), Mr. Anton Widjaya (Consultant), Dr. Iwan Ariawan (Consultant), Ms. Yum Jumiarni (IBI representative), Yetty Irawan (IBI representative), and other MCHIP staff; Perkumpulan Obstetri dan Ginekologi Indonesia (POGI/Indonesian Association of Obstetricians and Gynecologists) and the MOH were not able to attend the meeting.

Mr. Brooke provided a brief summary of the status of the oxytocin quality assessment and Kalbe Farma's possible development of oxytocin in Uniject. He mentioned that we would be meeting with Kalbe Farma the following day to better understand their reluctance to move forward with oxytocin in Uniject.

Ms. Lorensen provided an overview of the results from the willingness to pay for oxytocin in Uniject among private midwives study. Several discussion points emerged throughout the presentation:

- USAID Indonesia Mission individuals attending the meeting had joined USAID in 2011. They inquired as to the original study hypothesis. Mr. Brooke and Ms. Hyre explained that the former Director of Public Health at the MOH was very interested in oxytocin in Uniject as a means for increasing coverage of oxytocin for AMTSL in rural and remote settings. USAID and the MOH were, therefore, planning a demonstration/pilot study in rural communities. However, a pilot study was already performed in Indonesia in 2000, and acceptance was high. Recognizing that the larger hurdle was the lack of a local manufacturer of oxytocin in Uniject, there was interest in confirming market demand in the private, less-price-sensitive segment of the market, and securing local production capabilities. Further conversations with the MOH indicated their interest in assessing the current quality of oxytocin in Indonesia to understand if storage and distribution of the product is adequate. Thus, the original

pilot study evolved into a quality, willingness to pay, and technical support project, which took place in 2011.

- Results from the willingness to pay study showed that Uniject with a time-temperature indicator (TTI) is most preferred; oxytocin in an ampoule with a TTI is next-most preferred, followed by oxytocin in Uniject without a TTI. USAID representatives recognized that these findings suggest a TTI is the preferred market differentiator, and therefore, a priority for manufacturers of oxytocin over Uniject. Further discussion around the drivers for implementing TTIs took place. First, regulatory oversight and laboratory support would be required to qualify the appropriate TTI based on manufacturer stability data. Second, given potential perceived liabilities on behalf of manufacturers, should distribution channels fail to effectively deliver a product in a controlled-temperature environment and buyers blame manufacturers, policy change may be required to drive manufacturer adoption. All meeting participants agreed that the MOH should consider policy changes related to revising storage temperature guidelines for oxytocin, and consider the implementation of TTIs.
- Ms. Ibu Yum and Ms. Ibu Yetty offered to present the willingness to pay results at the annual midwifery meeting in November. A copy of the presentation was forwarded to them for this purpose.
- Should the MOH be interested in learning of the willingness to pay study results, Dr. Ariawan offered to share the presentation with them at a later date.

### **Meeting with Kalbe Pharmaceuticals, 24 August 2011**

Participants included: Ms. Upik Rosawati Junizar (Business Development Senior Manager), Dr. Dheny Setyawan (Head of Obstetrics Products), Dr. Irwan Widjaja (Medical Manager), Dr. Artati (Medical Manager), Mr. Steve Brooke (Commercialization Advisor), Ms. Kristina Lorenson (PATH Commercialization Officer)

Mr. Brooke provided a brief summary of our meeting with USAID Indonesia, MCHIP, and IBI.

Ms. Lorenson provided an overview of the results from the willingness to pay for oxytocin in Uniject among private midwives study (see Appendix 1 for her slide presentation). The discussion which followed focused on Kalbe Farma's status of considering oxytocin in Uniject.

- Kalbe indicated that at this time, they do not see a clearly profitable business case for Uniject among their current products, including oxytocin, and they are not making any significant plans to invest in Uniject filling and finishing capacity or launch any products in Uniject in the Indonesian market.
- At the same time, Kalbe did confirm that they have started stability studies with oxytocin in Uniject as a small-scale technical feasibility exercise, and that their six-month stability results will be available in February 2012.
- Kalbe indicated that all of its prescription products related to maternal health are distributed to hospitals and targeted to OBGYNs rather than midwives. Thus, they do not have a sales or distribution channel to midwives, nor products other than oxytocin which would be appropriate for such a channel.

- Kalbe stated that there are no other pharmaceutical products in their portfolio which would be appropriate for Uniject. They also commented that if they were to purchase a production line for Uniject, their oxytocin demand forecasts indicate they would only require a few weeks of production per year to meet the demand. At US\$1 million for the fill equipment, they could not justify the economic rational of such an investment.
- Kalbe was interested in learning whether other countries in Asia were using oxytocin in Uniject, and if other manufacturers in the region were considering this platform. Steve did mention BD’s investigation with Biofarma, the Indonesian vaccine producer that already has Uniject filling and finishing capacity in place, to understand whether they could share their production line with pharmaceutical companies. The discussions concluded that the significant regulatory compliance issues associated with sterile filling of drugs on the same Uniject production line as vaccines made this option not feasible.
- Kalbe’s business development team mentioned that they will be sharing the willingness to pay study with the marketing team for further internal discussion.

### Action Items

Activity	Estimated Date of Completion	Responsible Organization
Finalize the willingness to pay report	23 September	PATH

### Key Contacts

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# Appendix 1. Overview of Willingness to Pay Study

## Willingness to Pay Assessment for Oxytocin in Uniject™ Among Private Midwives in Indonesia

Summary of findings

August 2011




## Presentation Outline

- Project background
- Childbirth in Indonesia
- Study design
- Results
- Conclusions

## Project background

A willingness to pay assessment for oxytocin in Uniject and oxytocin with a time-temperature indicator (TTI) was performed among private midwives in Indonesia in April 2011.

The project was supported by PATH in collaboration with MCHIP and Ikatan Bidan Indonesia (IBI) and funded by the USAID Indonesia Mission

**Uniject Injection System:**  
Developed by PATH in 1987 in response to WHO's call for improved injection delivery designs

- Single dose for minimal waste of drug or vaccine
- Prefilled, sterile, and easy to use by a variety of health workers
- Non-reusable to prevent the spread of HIV and other diseases



More than 73 million Uniject injections have been administered over the last 10 years including: hepatitis B and tetanus toxoid vaccines, injectable contraceptives, and oxytocin

## Project background



**Time Temperature Indicator (TTI):**

- Oxytocin is a heat-sensitive medication with varying storage requirements, depending on the stability studies performed by the manufacturer
- WHO-recommended storage environment for oxytocin is in a refrigerator (2°C-8°C), helping to ensure it is effective for its intended shelf-life (usually two years)<sup>1</sup>
- Most oxytocin brands may be stored in a cool place (<30°C) for a maximum of three months
- Similar to vaccine vial monitors (VVMs) for vaccines, a TTI will indicate when a product has been exposed to excessive heat



- The TTI label is a temperature sensitive chemical indicator intended for the primary package of individual drug products
- If the inner square becomes the same color or darker than the outside circle, the product has been exposed to excessive cumulative heat and should be discarded

1. WHO. Basic Pharmaceutical Products for Pregnancy and Postpartum. [http://www.who.int/medicines/essential/med\\_ess\\_1991.html](http://www.who.int/medicines/essential/med_ess_1991.html). Available at: [http://www.who.int/medicines/essential/med\\_ess\\_1991.html](http://www.who.int/medicines/essential/med_ess_1991.html)

## Childbirth in Indonesia



- 4.4 million births per year
- 73% of births are attended by a skilled provider (OB/GYN, doctor, or midwife)
- 53% of births take place in the home<sup>2</sup>
- From 2002-2007, facility-based deliveries increased to 47%, with over 90% of the increase due to the use of private-sector facilities<sup>3</sup>
- Each year, 228 maternal deaths occur per 100,000 live births
- Postpartum hemorrhage (PPH) and eclampsia are the two leading causes of maternal death

<sup>1</sup> Calculated from CIA World Factbook (2010 data), and Indonesia Demographic Statistics Survey, 2007.  
<sup>2</sup> World Bank, *Indicator: sh.UV.SRVS.VS.NV*, August 2010. Available at: <http://data.worldbank.org/SH/SH.UV.SRVS.VS.NV>  
<sup>3</sup> <http://www.who.int/mediacenter/factsheets/fs004/en/>

## Oxytocin for Active Management of Third Stage of Labor (AMTSL)

- PPH is a leading cause of maternal mortality in Indonesia
- Active management of the third stage of labor (AMTSL) is proven to help prevent PPH by over 50%
- Key components of AMTSL include:
  - Administration of a uterotonic within one minute after birth of the baby after ruling out the presence of another baby
  - Controlled cord traction with counter-traction to support the uterus
  - Uterine massage after delivery of the placenta<sup>4</sup>
- Oxytocin is recommended by WHO as the preferred uterotonic use with AMTSL due to its characteristics:
  - Effective in 2-3 minutes after injection
  - Minimal side-effect profile
  - High stability profile [compared to ergometrine]<sup>5</sup>



<sup>4</sup> <http://www.who.int/mediacenter/factsheets/fs004/en/>  
<sup>5</sup> WHO. Active Management of Normal Pregnancy and Vaginal Birth of Normal Babies. [http://www.who.int/medicines/essential/med\\_ess\\_1991.html](http://www.who.int/medicines/essential/med_ess_1991.html). Available at: [http://www.who.int/medicines/essential/med\\_ess\\_1991.html](http://www.who.int/medicines/essential/med_ess_1991.html)

## Willingness to pay study design: Objectives

### Primary study objectives:

- Understand the preferred brands and use of oxytocin by private midwives
- Assess the perception of oxytocin in Uniject with or without TTi among private midwives in Indonesia
- Assess the willingness to pay for oxytocin in Uniject among private midwives in Indonesia

### Secondary objective:

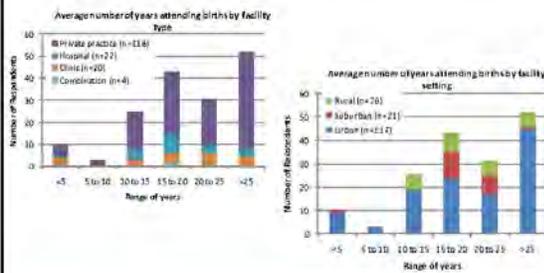
- Identify challenges and barriers to market introduction and adoption of oxytocin in Uniject in Indonesia

## Willingness to pay study design: Methodology

- Conducted 2 workshops with 164 total respondents: 81 private midwives in Jakarta and 83 private midwives in Bandung
- Provided project background and demonstrated Uniject
- Private midwives practiced giving injections with Uniject into citrus fruits
- Midwifery students conducted one-on-one surveys in Bahasa with private midwives consisting of questions pertaining to current oxytocin use and purchases, feedback on Uniject and TTIs, as well as willingness to pay for oxytocin in Uniject and TTIs
- Willingness to pay methodologies included:
  - Assessment of current brands and prices to establish reference pricing
  - Van Westendorp Price Sensitivity Meter to assess optimal product price
  - Discrete choice modeling to assess propensity to buy
  - Assessment of price and attribute trade-offs between oxytocin in a vial or Uniject, with or without a TTi

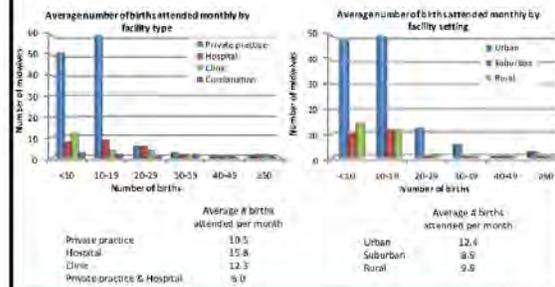
## Midwifery experience of study participants

- 92% of the private midwives participating in the study brought over 10 years of experience attending births in Indonesia



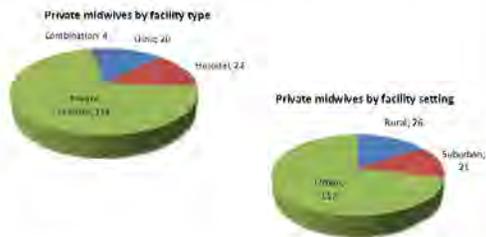
## Average number of births attended monthly

- Across the 164 private midwives, an average of 11.5 births are attended monthly

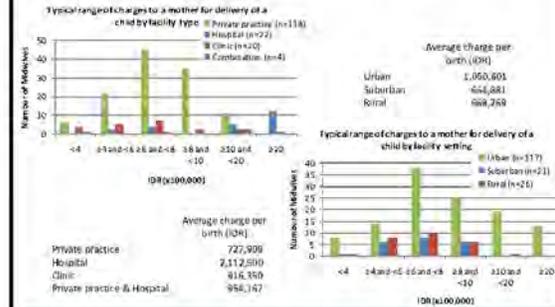


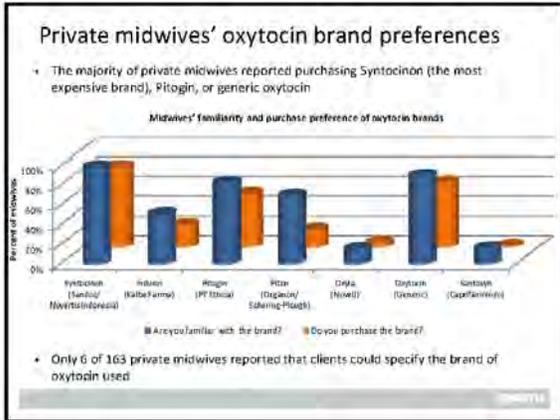
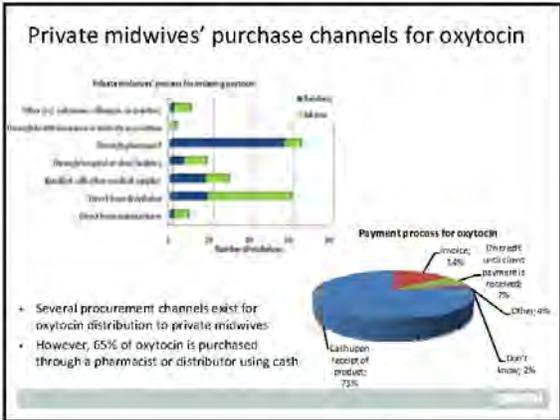
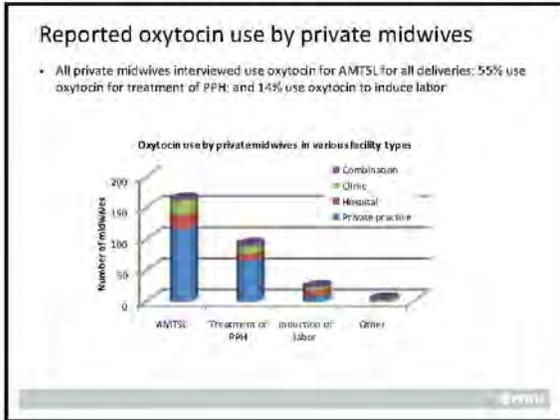
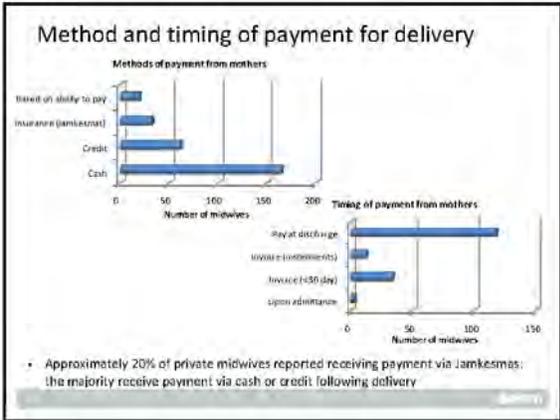
## Demographics of study participants

- Private midwives joined in Bandung (n=81) and Jakarta (n=83) for several hours to participate in a workshop.



## Private midwives' reported range of charges for delivery of a child





### Oxytocin brand preferences for use in AMTSL

- Rationale provided for private midwives' brand preferences included:

Rationale	Number of midwives
Works faster	24
High quality	19
Well-known/trusted/popular brand/product	19
Easy to obtain	18
I'm experienced/familiar with this product/it's a habit	12
Product-specific concerns (e.g., dosage size, viscosity, storage concerns)	12
More effective/better	11
Price may be higher, but that signals quality	11
Affordable	10
As long as it's oxytocin, the brand doesn't matter	8

### Reported prices paid for oxytocin brands by private midwives

Oxytocin brand	IMS 2009 price per 10 IU ampoule (IDR)	Number of private midwives' price estimate per 10 IU ampoule (IDR)				
		<5,000	>5,000 and <10,000	>10,000 and <20,000	>20,000 and <100,000	>100,000
Oxytocin (generic)	2,806	14	1	2	1	64
Pitogen (PT Ethical)	2,315	9	0	3	1	82
Oxila (Novartis/Pharmaceuticals)	4,526	1	0	0	0	162
Induch (Kalbe Farma)	6,336	14	11	5	2	122
Syntocinon (Capfarmin/PT)	8,145	2	0	0	0	162
Pitox (Organon/Schering-Plough)	10,138	3	7	1	1	144
Syntocinon (Novartis/Indonesia)	10,862	4	38	77	2	43

- The majority of private midwives were aware of the range of oxytocin prices across brands in Indonesia (important to establish prior to engaging in willingness to pay).

### Private midwives' perception of the price of oxytocin

- Private midwives were asked if the cost of oxytocin was an important part of the overall costs they paid to assist with a delivery; 86% responded "no"

	Rationale	Number of midwives
Yes =21	Oxytocin price impacts the total birthing price	10
	Depends on the need for multiple doses	3
	No explanation	8
No =141	Included in the total birthing package	86
	Only a small percent of total cost	2
	Inexpensive and affordable	16
	Client's safety is the priority	1
	Depends on the need for multiple doses	22
	No explanation	64
	Not sure = 3	No explanation
<b>Total =164</b>		

- The price of 10 IU of oxytocin is approximately 1-2% of the cost of delivering a child

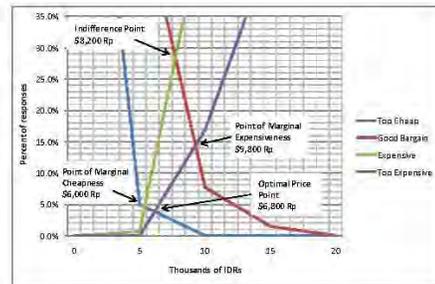
### Private midwives' perception of oxytocin in Uniject

- Prior to the workshop, 92% of the private midwives had used Uniject for infant hepatitis B vaccinations
- Private midwives provided feedback on their preference for oxytocin in Uniject compared to an ampule with traditional needle and syringe:
  - 90% perceived the time to prepare and administer oxytocin during AMTSL would be faster with Uniject
  - 93% perceived Uniject to be safer for delivery of oxytocin
  - 94% perceived Uniject would simplify AMTSL
- Overall, 93% of private midwives preferred oxytocin in Uniject for AMTSL

### Private midwives' optimal price for oxytocin in Uniject

- Van Westendorp Price Sensitivity Meter assessed private midwives' optimal price for oxytocin in Uniject by asking:
  - At what price would you consider a 10 IU oxytocin in Uniject to be priced so low that you would feel the quality could not be very good?
  - At what price would you consider a 10 IU oxytocin in Uniject to be a bargain—a great buy for the money?
  - At what price would you consider a 10 IU oxytocin in Uniject starting to get expensive, so that it is not out of the question, but you would have to give some thought to buying it?
  - At what price would you consider a 10 IU oxytocin in Uniject to be so expensive that you would not consider buying it?

### Private midwives' optimal price for oxytocin in Uniject



### Private midwives' oxytocin choice for purchase

- Discrete choice modeling assessment of private midwives' propensity to buy
- Private midwives were asked to check which one oxytocin product they would purchase for use during AMTSL for their next delivery:

Check one	Brand (Manufacturer)	Estimated 10 IU price (IDR)
	Syntocinon (Sandoz/Novartis Indonesia)	10,862
	Oxytocin in Uniject (To be determined)	10,862
	Oxytocin (Generic)	2,806

Check one	Brand (Manufacturer)	Estimated 10 IU price (IDR)
	Syntocinon (Sandoz/Novartis Indonesia)	10,862
	Oxytocin in Uniject (To be determined)	7,336
	Oxytocin (Generic)	2,806

Check one	Brand (Manufacturer)	Estimated 10 IU price (IDR)
	Syntocinon (Sandoz/Novartis Indonesia)	10,862
	Oxytocin in Uniject (To be determined)	8,850
	Oxytocin (Generic)	2,806

### Private midwives' oxytocin choice for purchase

- The majority of private midwives selected oxytocin in Uniject over other oxytocin products, regardless of price
- 69% of midwives chose oxytocin in Uniject when price matched the premium priced product currently on the market in Indonesia

Brand (Manufacturer)	Proposed price per 10 IU oxytocin in Uniject			
	Price per 10 IU	7,336 IDR	8,850 IDR	10,862 IDR
Oxytocin in Uniject (To be determined)		81%	78%	69%
Syntocinon (Sandoz/Novartis Indonesia)	10,862 IDR	11%	12%	16%
Oxytocin (Generic)	2,806 IDR	8%	10%	15%

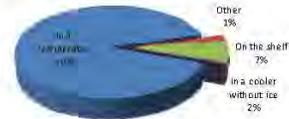
### Private midwives' perception of TTIs

- 98% of private midwives believe the Time Temperature Indicator (TTI) will provide a large increase in quality of AMTSL services they provide to patients
- Lower waste (19%), familiar (8%), safety (5%), and effectiveness (4%) of oxytocin were provided as rationale for the quality improvement TTIs may offer

### Storage environment of oxytocin by private midwives

- 90% of private midwives reported storing their oxytocin in a refrigerator
- Midwives indicated storage of oxytocin in a refrigerator would allow the product to last longer and maintain its effectiveness and quality
- Concerns were expressed in discussion about the storage environments at other segments of the supply chain

Midwives' storage environment for oxytocin



### Private midwives' willingness to pay for TTIs

- Assessment of price and attribute trade-offs between oxytocin in a vial or Uniject, with or without a TTI
- Private midwives were asked to rank the following based on preference to purchase for use during AMTSL assuming: 1=first choice to 4=last choice

Rank	Product	Estimated 10 IU price (IDR)
	Oxytocin product in a vial	6,336
	Oxytocin in Uniject	7,500
	Oxytocin product in a vial with TTI	6,511
	Oxytocin in Uniject with TTI	7,675

Rank	Product	Estimated 10 IU price (IDR)
	Oxytocin product in a vial	6,336
	Oxytocin in Uniject	7,500
	Oxytocin product in a vial with TTI	7,214
	Oxytocin in Uniject with TTI	8,378

### Private midwives' willingness to pay for TTIs

- 91% of private midwives selected oxytocin in Uniject with a TTI with the highest comparative price as their first product choice for AMTSL

1 <sup>st</sup> choice	2 <sup>nd</sup> choice	3 <sup>rd</sup> choice	Last choice	Product	Estimated 10 IU price (IDR)
1%	1%	8%	89%	Oxytocin product in a vial	6,336
4%	17%	70%	9%	Oxytocin in Uniject	7,500
3%	76%	20%	1%	Oxytocin product in a vial with TTI	6,511
91%	5%	2%	1%	Oxytocin in Uniject with TTI	7,675

1 <sup>st</sup> choice	2 <sup>nd</sup> choice	3 <sup>rd</sup> choice	Last choice	Product	Estimated 10 IU price (IDR)
1%	1%	9%	89%	Oxytocin product in a vial	6,336
4%	19%	68%	9%	Oxytocin in Uniject	7,500
4%	74%	21%	1%	Oxytocin product in a vial with TTI	7,214
91%	5%	2%	1%	Oxytocin in Uniject with TTI	8,378

### Private midwives' concerns regarding oxytocin in Uniject

- Approximately 12% of midwives voiced a concern of the lack of aspiration with Uniject; however, midwives commented that this has not been a problem with administration of hepatitis B vaccine in Uniject to infants
- Uniject is generally accepted and preferred to vials with a needle and syringe; however, 2-3 midwives did express difficulties regarding activation of the device when using it to vaccinate infants
- Concerns were expressed about delivery of a complete dose with drug still remaining in the Uniject reservoir, as well as concerns about the feasibility of Uniject given ethnic specificity and prevalence of anemia

### Clarifications provided to private midwives on concerns related to oxytocin in Uniject

- Activation in advance of use is of interest to midwives and if it's considered a preferred standard operating procedure for midwives, the needle shield must remain in place; however, this is not recommended practice
- Sterilization/disposal of needles is a priority to some midwives, as there is concern safe waste-destruction protocols are not followed beyond the health facility; thus, it is customary to dip needles in chlorine bleach after use and before disposal, and Uniject could be handled and treated in the same way
- Location in the refrigerator for storage and prevention of freezing were topics of interest to the midwives

## Conclusions and discussion

- Of the private midwives interviewed, 93% prefer oxytocin in Uninject for AMTSL, and 98% believe a Time Temperature Indicator (TTI) will provide a large increase in quality of AMTSL.
- 86% of private midwives responded that the cost of oxytocin was not an important part of the overall costs they paid to assist with a delivery.
- Based on the private midwives' reported costs to deliver a child, the price of 10 IU of oxytocin comprises approximately 1-2% of the total cost.
- Private midwives' optimal price range for oxytocin in Uninject is between 5,000 and 9,800 IDR per 10 IU dose.
- 78% of private midwives indicated an intent to purchase oxytocin in Uninject priced at 8,850 IDR and 69% are willing to purchase oxytocin in Uninject at a price of 10,862 IDR, comparable to the most expensive oxytocin product currently available in Indonesia.
- A larger majority (91%) are willing to purchase oxytocin in Uninject with a TTI at a price of 8,378 IDR.

***Thank you very much for your interest and time.***