



**USAID**  
FROM THE AMERICAN PEOPLE

**EMAS**

Saving lives of mothers and newborns

# Data visualization to strengthen data-based programmatic decision making & communication

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# Expanding Maternal and Neonatal Survival (EMAS)

- USAID-funded
- \$55 million, 2011-2017
- 150 hospitals, 300 health centers in Indonesia
- 6 provinces, 30 districts, 200+ staff
- Consortium: Jhpiego, RTI, Save, LKBK, Muhammadiyah



# Where we started

- Data visualization was not our goal.
- Our goal was to understand what information was needed to assess performance against key outcomes to support internal program decision-making and to inform facility-level accountability and action.
- We invested in systems to collect relevant information and to strengthen data quality
- This foundation of relevant, quality data facilitated effective visualization

# Communicating Results

## Examples of products

- Monthly Facility-level Data Dashboards
- Monthly MOH report
- Quarterly M&E Update
- Annual Report: Executive Summary for the MOH

## Factors we take into account

- Audience
- What information do they need?
- How frequently do they need it?
- Availability and quality of the data
- How should the information be analyzed and organized to maximize its message?
- Incorporate data visualization to maximize results communication

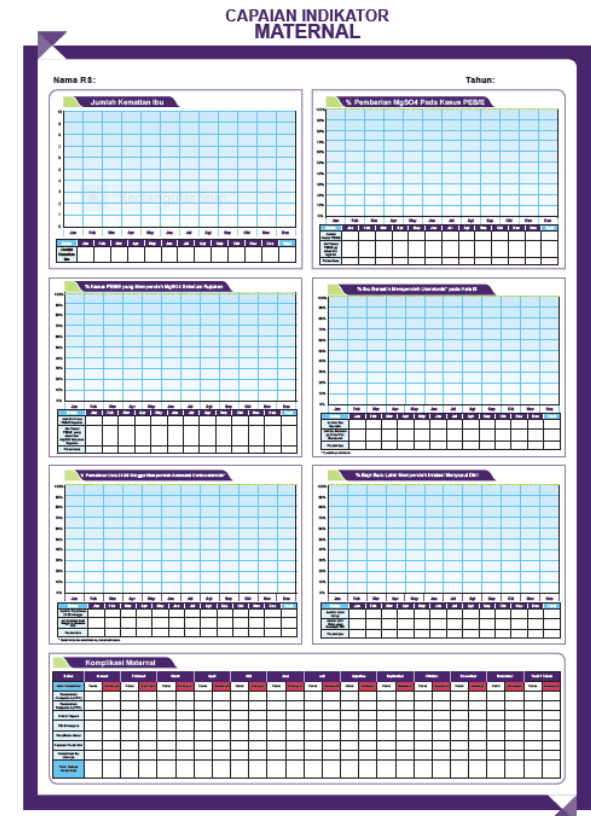
# A FEW EXAMPLES OF HOW WE LOOK AT OUR DATA

# Facility-level Data Visualization

Clinical Dashboard to Monitor Monthly Performance



Data for Decision-Making Posters to Track Performance Trends





# Data Visualization to Communicate with Stakeholders

**Product:** Quarterly Update Summarizing Trends in Program Performance

**Audience:** Policy makers and program leadership

**Product:** Infographics

**Audience:** Local stakeholders and donor reporting

**EMAS Quarterly Performance Update National**  
 Year 3 Quarter 2: January – March 2014

Part 1: Clinical Performance  
 Part 2: Clinical Governance Standards  
 Part 3: Referral Standards and MPA  
 Part 4: EMAS Intervention Performance vs Service Statistic Results

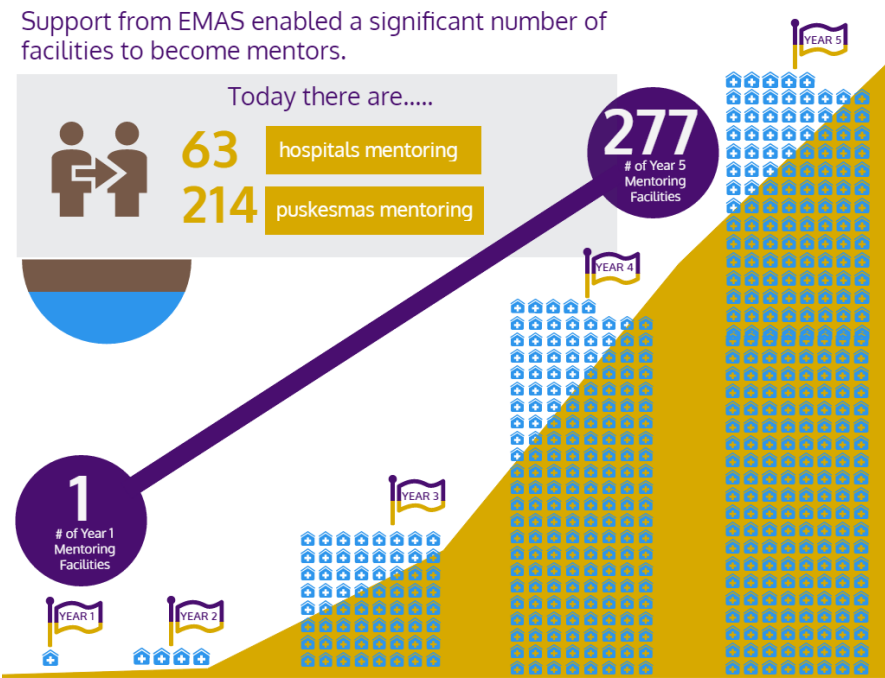
**Table 1. Phase 1 - Maternal and newborn service statistics (n = 23 hospitals and 93 puskesmas)**

EMAS Phase 1 Facilities	YR2 Q1	YR2 Q2	YR2 Q3	YR2 Q4	YR3 Q1	YR3 Q2
Number of women delivering	11,053	12,496	14,071	13,449	12,599	10,244
Number of live births					12,002	9,515
Number of live births ≥ 24						
Number of fresh still births*						
Number of fresh still births ≥ 2000 grams						
Number of newborn deaths						
Newborn deaths ≥ 24 hours and > 2						
Newborn deaths < 24 hours and > 2						
Total number of maternal deaths						

**Part 3: Referral Standards and MPA**

Figure 9. Percentage of referral standards achieved by district (April - December 2013)

District	Baseline (YR2Q2)	YR2Q3	YR2Q4	YR3Q1
Asahan	19%	68%	65%	65%
Bandung	20%	34%	75%	82%
Banyuwangi	51%	72%	66%	92%
Cirebon	35%	52%	94%	92%
Deli Serdang	9%	55%	61%	76%
Malang	32%	83%	83%	76%
Pinrang	41%	73%	85%	76%
Serang	20%	86%	88%	88%
Sidoarjo	21%	73%	73%	76%
Tegal	26%	78%	78%	76%



# Data Visualization to Inform Programmatic Decision-Making

**Product:** Facility-level Dashboard with Monthly Coverage of Evidence-based Interventions; color-coded for follow-up

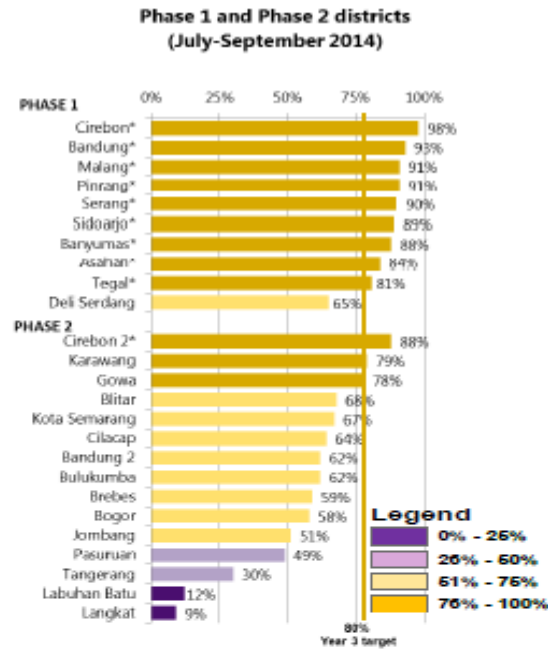
**Audience:** Province and District-level Teams

CLINICAL DASHBOARD FOR HOSPITAL (APRIL-JUNE 2014)

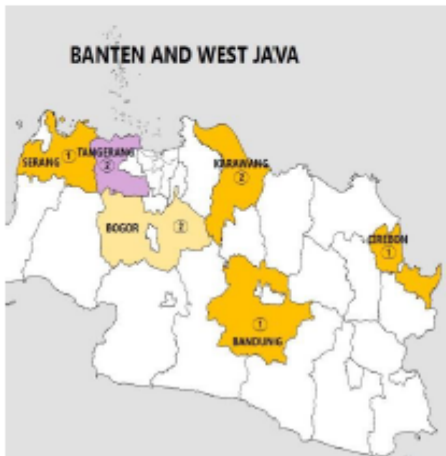
MATERNAL					NEONATAL							
1. ACS (% of women delivering at 24-34 weeks who received ACS)	2. MgSO4 (% of PE/IE cases treated with MgSO4)	3. MgSO4 Referral (% of referred PE/IE cases treated with MgSO4 before referral (hospital only))	4. Uterotonic (% of deliveries that receive a uterotonic in the 3rd stage of labor)	5. % Maternal Death review within 24 h	1. Audit on Neonatal death > 2kg	2. % of newborn deaths (0-28 days) < 999 gr	3. % of newborn deaths (0-28 days) 1000 - 1499 gr	4. % newborn deaths (0-28 days) 1500 - 1999 gr	5. % of newborn deaths (age 0-28 days and weight > 2.000 gr)	6. VTP (% of newborns with Asphyxia, received Positive Pressure Ventilation )  The Value is not expected to be 100	7. IMD (% of newborns breastfed within 1 hour of delivery (among live births )	8. ANTIBIOTICS REFERRAL (% of newborns referred with infection, given antibiotic before referral (hospital only)
100%	100%	0%	100%	100%	0%	0%	36%	18%	45%	65%	39%	No Case
96%	87%	2%	100%	67%	0%	21%	36%	0%	43%	17%	2%	18%
61%	84%	13%	100%	100%	No Case	0%	17%	17%	67%	48%	2%	No Case
61%	84%	0%	99%	56%	0%	6%	17%	28%	50%	8%	10%	No Case
91%	93%	57%	100%	100%	0%	0%	16%	31%	53%	64%	26%	86%



# Use of Mapping to Visualize Results Across a Decentralized Program



Combining GIS and performance against annual targets to guide internal program management



*\*Note: coverage data are only available from EMAS-supported facilities*

# Lessons Learned

- Effective data visualization requires relevant data of sufficient quality to mobilize action
- Develop data products with primary users to maximize utility
- Information is POWERFUL! Data serve as a catalyst for action when trusted, available, and visible
- Visualization facilitated a broader awareness of performance & improved results communication within the EMAS program and in supported health facilities

# Thank you!

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