



# Secondary Data Use - incorporating Informatics into the Quality Improvement Cycle

## Workshop Results Update

Day 2 - Singapore National Health Informatics Summit 2009

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# The workgroup was focused on Secondary Data Use

The electronic health record will enable data to be stored and retrieved electronically, in principal facilitating secondary use of the contained data for other purposes on an aggregate level

- **Primary data use:** Direct use for treating and improving the health of patients
- **Secondary data use:** Using data for other matters than the direct care of patients  
*“standardized and linked” to improve overall safety and quality and cost-effectiveness*  
  
e.g. as per presentation from Regenstrief Institute this morning  
(GI Syndrome Outbreak - food handling incident)

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# The group identified key challenges in secondary data use today

## ▪ **Challenges in Data Gathering**

- Uncertainty about the quality of data being entered
- Lack of consistency
- Defining the population (is it the same patient?)
- Insufficient data detail
- Much data is not in electronic format or in free form text field

## ▪ **Challenges of Data Analysis**

- Gaps in the data (across provider groups)
- Missing pieces of information (goal definition)
- Missing tailored research tools
- Often unclear goals of the data analysis - reasearch, QA or QI

## ▪ **Information Dissemination**

- Takes time
- Value for the clinician is not always obvious
- Don't know what institutions have what data (and if it exists, can it be accessed)?
- Analysis of information before dissemination cumbersome
- Cost of documentation dissemination high

## ▪ **Action Taken**

- Difficult to ensure that action is really taken (alingment of incentives)?

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## Three main topics for future EHR-related secondary data use were identified

- **Breakout Group 1:** Public Health Surveillance
- **Breakout Group 2:**  
Assessment of National Programs (e.g. Chronic Disease Management), Clinical Quality Improvement
- **Breakout Group 3:** Real time operational control

# Breakout Group 1: Public Health Surveillance

Related Initiatives	Challenges & Considerations	Metrics & Benefits Realization
<ul style="list-style-type: none"><li>▪ <b>Constant Monitoring</b></li><li>▪ <b>Chronic Disease Mgmt Program</b></li><li>▪ <b>Clinical Pathways Analysis</b></li><li>▪ <b>Pharmaco-vigilance</b> (batch no, brand etc.)</li></ul>	<ul style="list-style-type: none"><li>▪ Mindset of the people (evidence for IT and EHR)</li><li>▪ Cost for all participants</li><li>▪ Perceived work inefficiencies</li><li>▪ Bad Experience</li><li>▪ Downtime</li><li>▪ Legislation required</li></ul>	<ul style="list-style-type: none"><li>▪ Decrease cost</li><li>▪ Mitigate risk</li><li>▪ Healthcare statistics (incidents, prevalence)</li></ul>

# Breakout Group 2: Assessment of National Programs (e.g. Chronic Disease Management), Clinical Quality Improvement

Key Initiatives	Challenges & Considerations	Metrics & Benefits Realization
<ul style="list-style-type: none"> <li>▪ <b>Phase IV Surveillance</b> (Monitoring, efficacy &amp; safety of drugs).</li> <li>▪ Medical care epidemiology and <b>segmentation by characteristics of patient</b> (high risk patient groups) <b>or treatment patterns</b></li> <li>▪ <b>Adequacy of Care:</b> analysis of unscheduled returns and admissions</li> </ul>	<ul style="list-style-type: none"> <li>▪ Who is the principal provider (clustering)</li> <li>▪ Provider - provider relationships (mapping of logical clusters)</li> <li>▪ Private sector, private GPs (reporting is a major burden) - what value can we offer - target champion GPs</li> <li>▪ Feedback (institutional level)</li> <li>▪ Need multiple data elements to ensure validation (single data element often not enough)</li> </ul>	<ul style="list-style-type: none"> <li>▪ How do findings influence policy (e.g. targeting of subsidies)</li> <li>▪ Who acts on the information we generate and is it in fact acted upon?</li> </ul>

# Breakout Group 3: Real time operational control

Key Initiatives	Challenges & Considerations	Metrics & Benefits Realization
<ul style="list-style-type: none"><li>▪ <b>Management of scarce resources</b> (antivenins, ICU beds, etc.) with alerts</li><li>▪ Program to focus on <b>analysis across acute and ambulatory incidents</b> (asthma, hip fracture)</li><li>▪ <b>Predictive Analysis</b> (e.g. a number of test being ordered)</li><li>▪ <b>Decision support</b> focused on individual GPs</li></ul>	<ul style="list-style-type: none"><li>▪ Government policy to access public repositories (eg death registry)</li><li>▪ Mortality data and readmission rates cannot be captured today</li><li>▪ Who will monitor and refresh the actions?</li><li>▪ How do you receive the alerts so you don't get alert fatigue?</li><li>▪ Symmetric exchange of data between public and private Hospitals</li><li>▪ "Killer app" and incentives</li></ul>	<ul style="list-style-type: none"><li>▪ Number of actions per items monitored</li></ul>