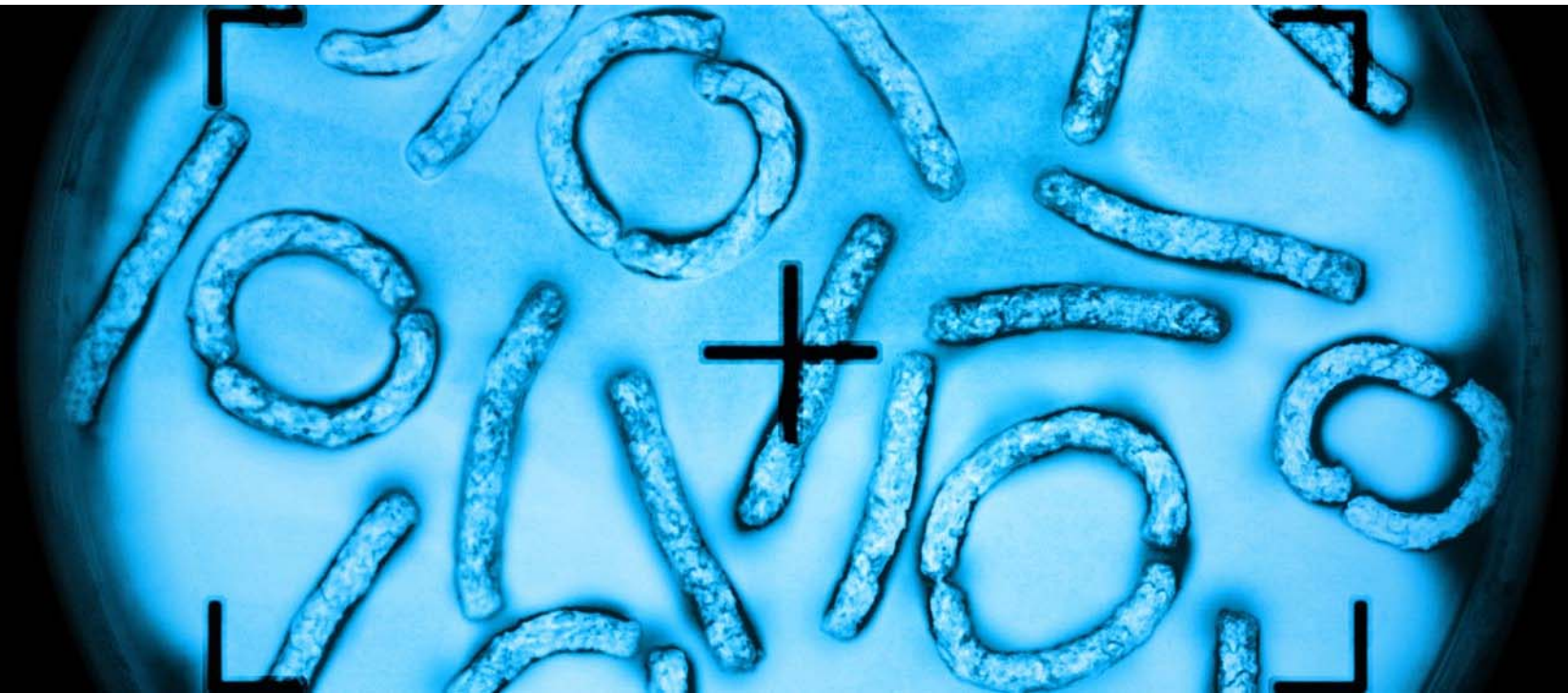


Male Circumcision in Africa Opportunity Assessment

Approaches to Forecasting and Risk/Decision Analysis

Kampala, *March 14, 2008*



About IMS Health

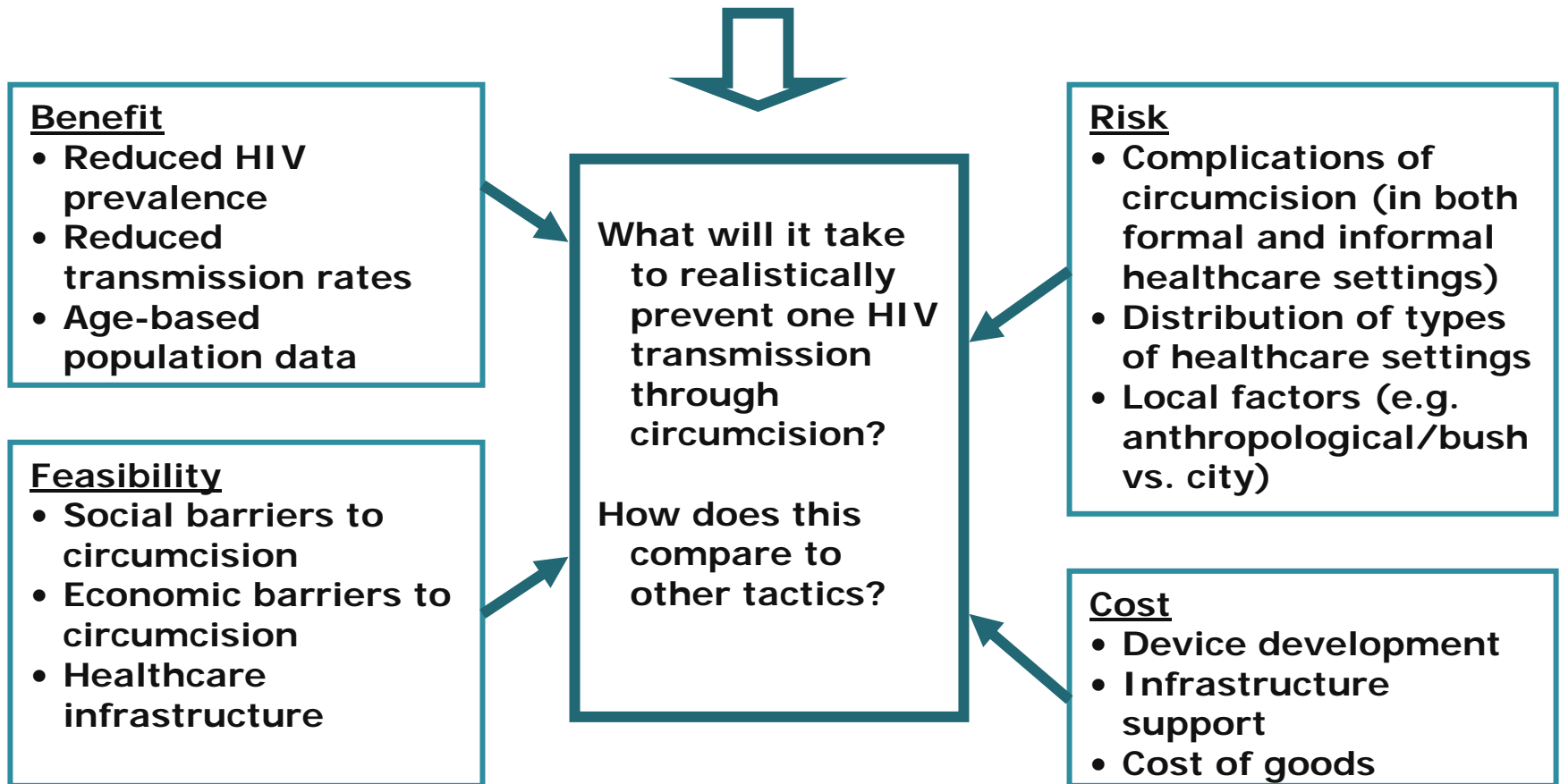
- IMS is a data and services provider to the pharma and biotech industry
- Quite large: present in 100 countries, 7000 employees
- Offers health care consulting: 1000 full-time consultants
- Has recently started an internal program to provide these services to an institutional and non-profit audience



The male circumcision program and preventing HIV-infection: key issues in relation to IMS' capabilities

- HIV remains one of the most challenging health issues of our time
 - *It is particularly acute in Sub-Saharan Africa*
 - *Solutions require a multi-pronged approach*
- Male circumcision holds some promise
 - *Studies are demonstrating a link between MC and reduced transmission of HIV*
 - *Additional cultural, political and religious complexities exist beyond typical HIV issues*
 - *There is significant uncertainty around adoption and impact*
- IMS could bring analytical rigor and consulting experience to this issue
 - Global presence (including consultants who have worked on developing world focused projects)
 - Strategic perspective and problem-solving experience
 - Forecasting and risk analysis capabilities

An analytical approach is needed to consolidate a multitude of variables into quantitative and actionable conclusions



As we have seen, quantifying issues can be quite challenging: some examples:

Messaging and communication



- Distinct messaging is required for different target populations
- Education must fit within the context of overall HIV/AIDS services

Stigma/Fear



- Many at-risk men may be deterred from seeking treatment and/or prevention measures
- Could be particularly challenging for MC if not common practice for a local population

Capacity limitations



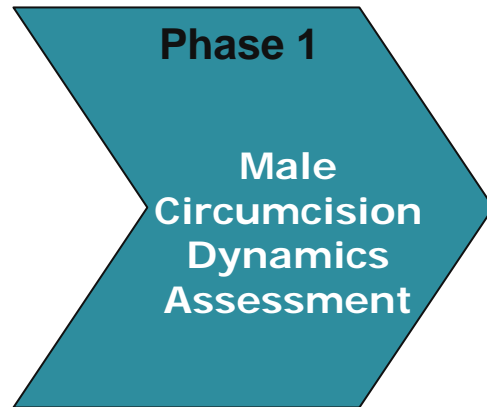
- Training and availability of service providers
- Safe and hygienic equipment and facilities

Financing and allocation of resources



- Competition for funds
 - Targeting sub-populations (truckers, sex workers, etc.)
-

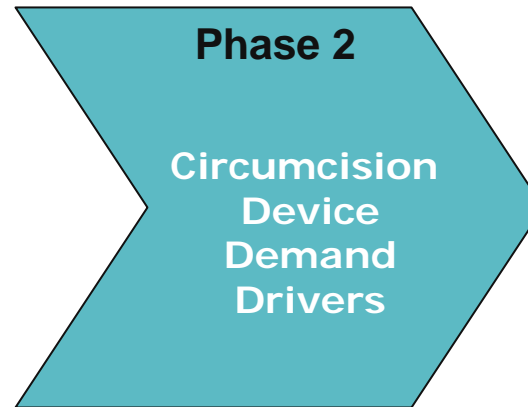
The overall objective is to understand the potential impact and drivers of influence for MC in the reduction of HIV transmission



“Identify Issues”

Activities:

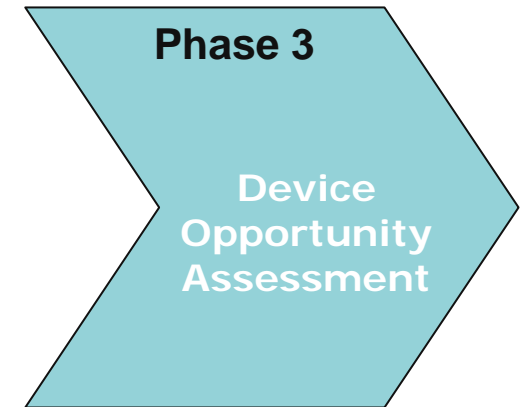
- Stakeholder interviews
- Secondary research and information scan
- Regional landscape and dynamics mapping



“Quantify Issues”

Activities:

- Primary research
- Forecast inputting

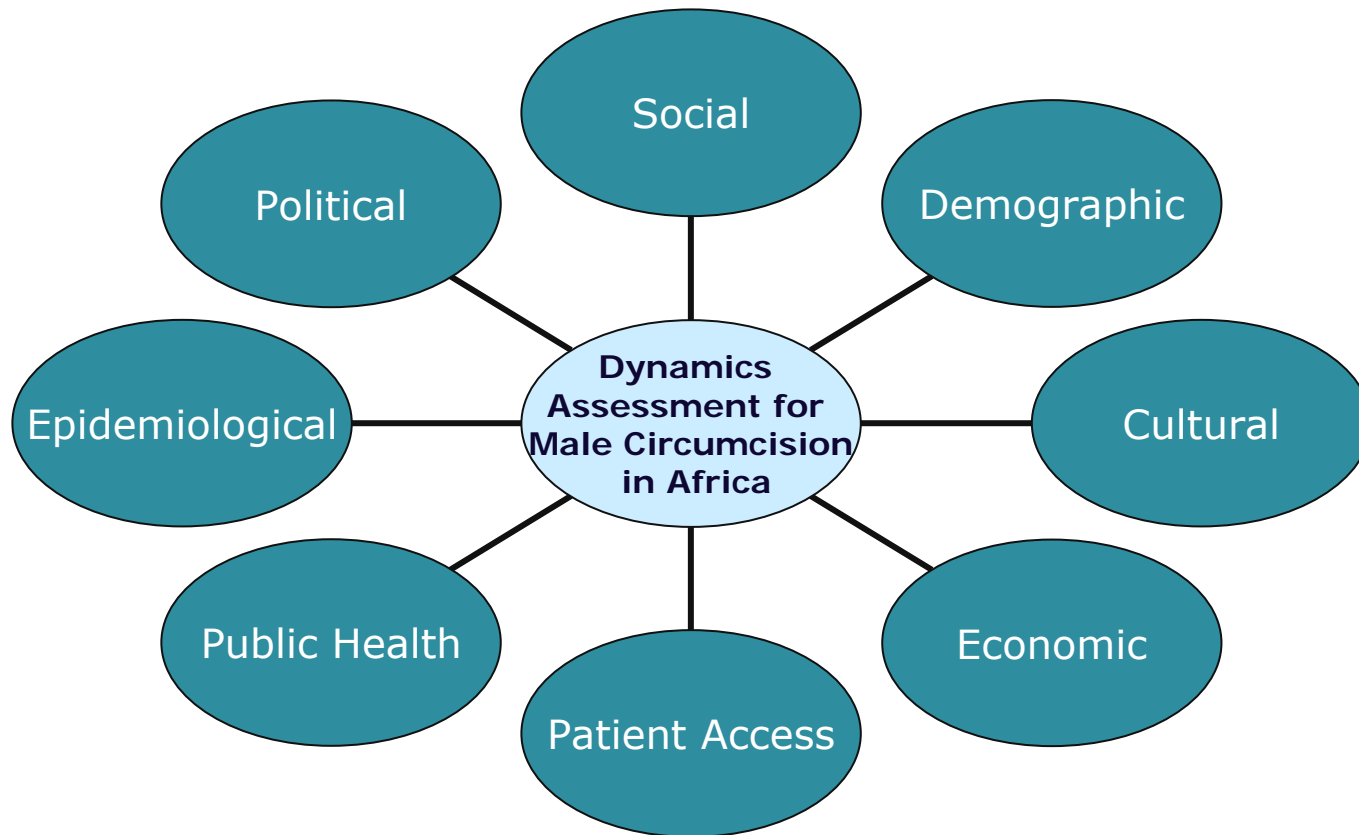
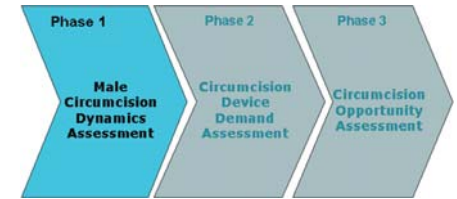


“Consolidate”

Activities:

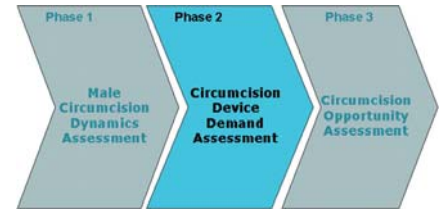
- Validation
- Risk and sensitivity analysis
- Quantitative outputs and insights

Phase 1 will develop a thorough understanding of the dynamics that affect the viability of a male circumcision program



Issues should be relevant: not too lo-level (tactics), not too hi-level

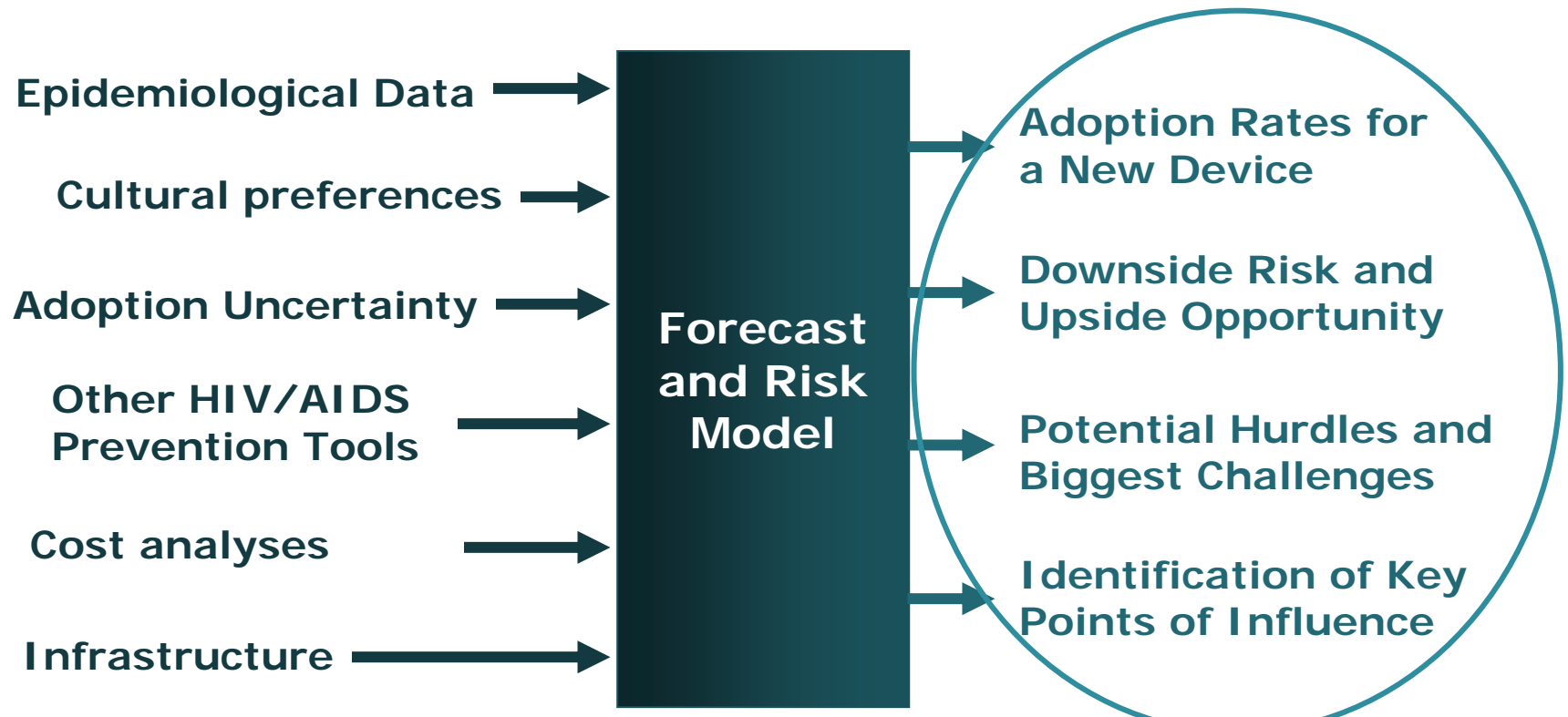
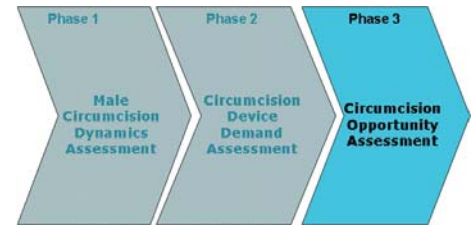
Phase 2 is where the quantitative framework is built up and fed with inputs



This phase will involve several major steps:

- 1. *Quantitative data collection*** for demographic information
- 2. *Epidemiological research*** and analysis
- 3. *Primary research*** with major stakeholders:
 - Health Authorities: on-the-ground infrastructure
 - Medical Professionals: current medical practices
 - Public Health Officials – NGOs: support available to circumcision initiative
 - Cultural/Social/Political Academics: social acceptability
 - Epidemiology Experts (e.g., London School of Hygiene and Tropical Medicine)

Phase 3 consolidates the findings to the required level of detail, and adds a risk and sensitivity analysis



The final output takes the form of a true decision analysis framework

Appendix

- Has this been done before? A not too dissimilar project...
- Deliverables of the different phases and output examples (taken from earlier projects)

Case study: a feasibility analysis for UNIDO: Essential Generic Medicines: Business Opportunities for Producers in Least Developed Countries (LDCs)

Background

The United Nations Industrial Development Organization (UNIDO) sponsors this in-depth feasibility analysis on local 'for profit' production of drugs for key diseases in Least Developed Countries.

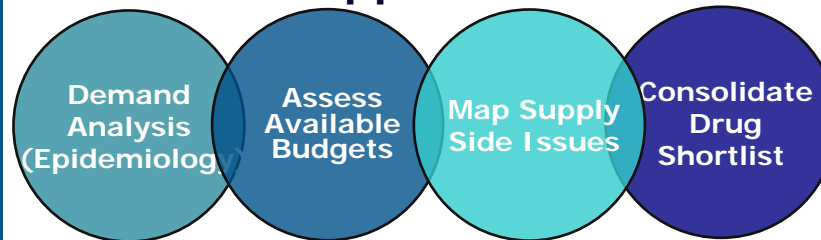
The diseases involved are AIDS, TBC, malaria and Neglected Tropical Diseases (NTDs). Local production could dramatically increase access to life-saving drugs.

The objective is to identify suitable drug candidates for local production, based on demand, available budgets and supply side feasibility.

Scope

- The analysis has a very broad geographical scope: 64 countries fall under the definition of either LDCs (UN) or Low Income Countries (World Bank).
- Three key diseases were in scope, with Neglected Tropical Diseases adding another fifteen pathologies.

Approach



- Based on extensive secondary research, supplemented with ad hoc primary research (opinion leader and stakeholder interviews), IMS built a comprehensive yet detailed forecast model (demand and available budgets).
- Supply side feasibility was based mainly on primary research (manufacturers, distributors).
- A scoring system allowed creating a shortlist of drugs most suitable for local production.

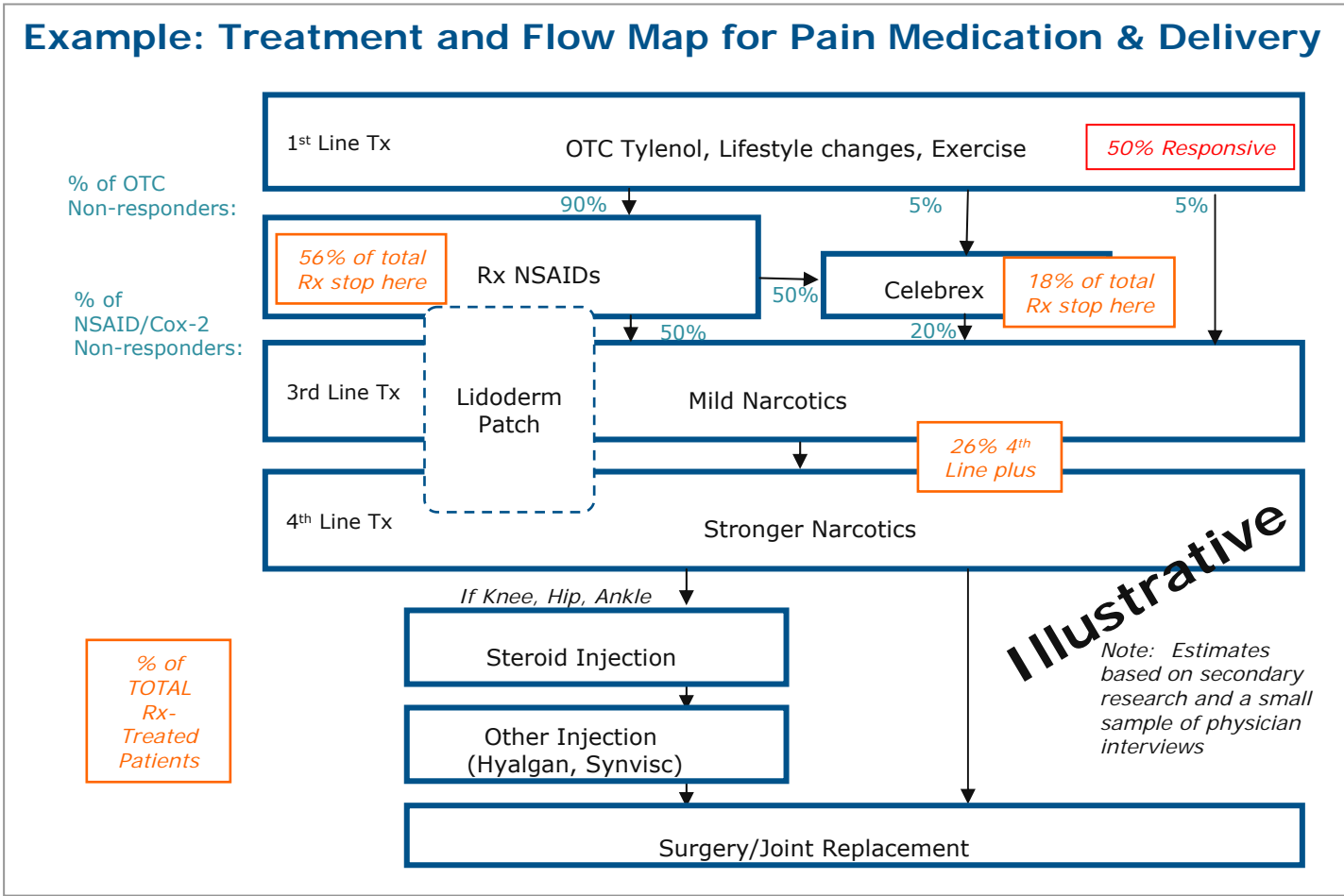
Take-Aways (ongoing)

- Drug demand clearly outweighs available budgets
- Merely formulating active ingredients into drugs may not create enough value to make small scale local production a viable business option
- Available WHO epidemiology data vary from good (AIDS) to unusable (malaria) – approximations built on secondary sources needed to be developed
- Mismatch between 'budget made available' and 'budget actually spent' is symptomatic for the chaotic situation in many countries

Phase 1: "Identify Issues"

- *Deliverables will include...*
 - *Current landscape and potential user decision flow map*
 - *Overlay of regional differences*
 - *Initial segmentation suggestions and rationale*
- *Insights to be gained...*
 - *Selection of highest-priority countries to focus on for quantitative analysis*
 - *Identification of critical questions to address in Phase 2*

Sample methodology: flowcharting can map the choices decision makers are facing



Sample methodology: prioritization among a long list of possible areas of focus can be based on a combination of qualitative and quantitative data

Attractiveness	Area	Purpose & Vision	Unique Contribution	Capabilities
Strong fit with client mission, customers, and capabilities; clear right to win	F	●	●	●
	I	●	●	●
	A	●	●	●
Good fit with client mission; need to develop capabilities and unique contribution	H	●	●	●
	B	●	●	●
	G	●	●	●
Potential fit, requiring significant investment and commitment	K	●	●	●
	L	●	●	●
	D	●	●	●
No clear right to win; minimal strength to build upon	J	●	●	●
	E	●	●	●

Example: Prioritization of Growth Areas for a Consumer Health Company

Characteristics	Area B Potential	Rationale
Purpose & Vision	●	<ul style="list-style-type: none"> These products and services improve lives and improve health outcomes. Client's reach and consumer understanding could provide superior product quality and experience, but no obvious portfolio fit with current businesses.
Unique Contribution	●	<ul style="list-style-type: none"> Significant unmet need in chronic conditions, where low compliance rates can lead to negative health outcomes. Competition and unclear reimbursement status could impose pricing challenges, but design and innovation could add value and maintain premium pricing.
Capabilities	●	<ul style="list-style-type: none"> Acquisition of a technology company coupled with strength required in this service marketing model imply big challenges for Client here. Design and professional relationships lend value and credibility, but a single-purchase, technology-based, services contract business is a stretch for Client today.

Illustrative

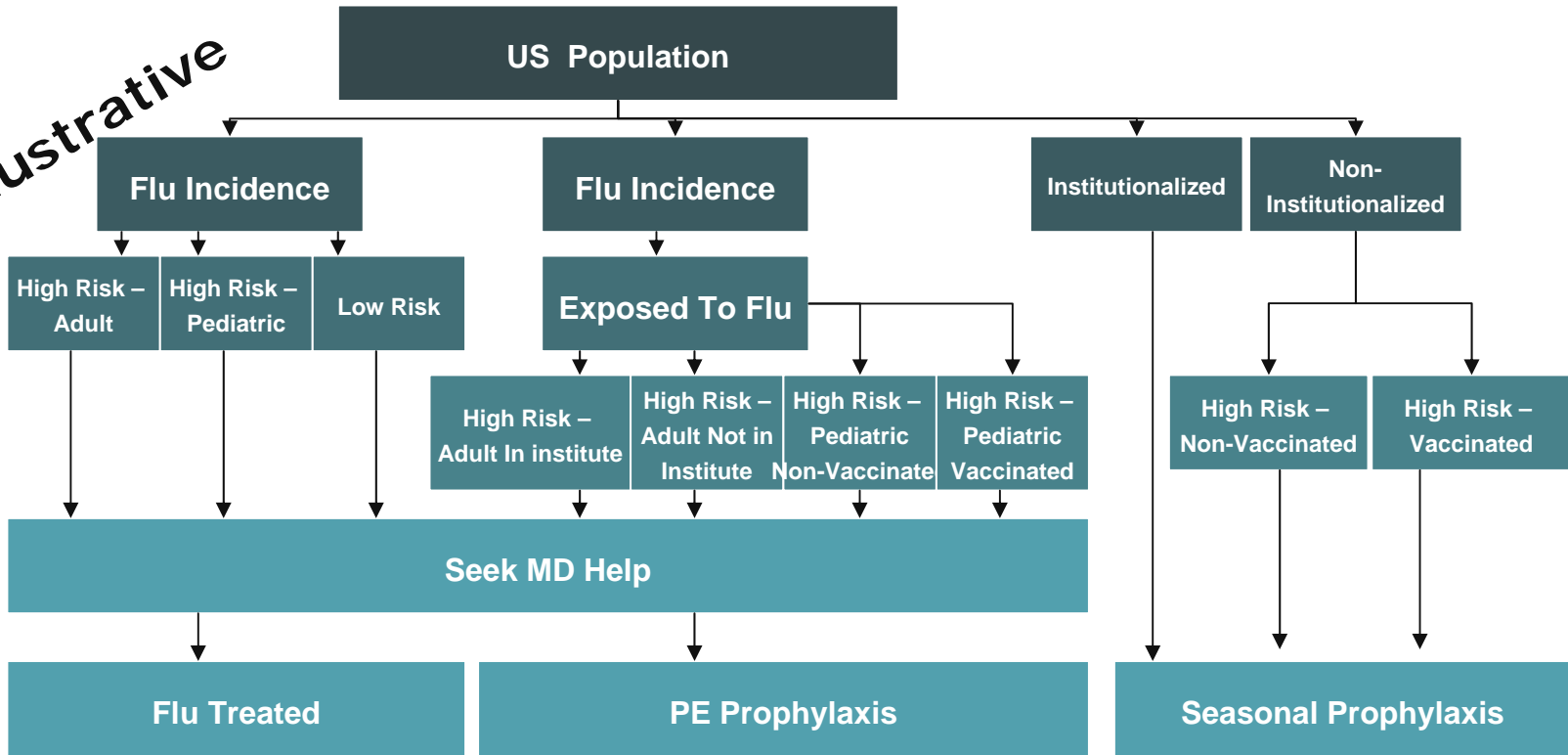
Phase 2: "Quantify Issues"

- *Deliverables will include...*
 - *Relevant demographic and epidemiologic data for selected countries of interest*
 - *Initial highlights of different country characteristics*
 - *Preliminary forecast and risk model structuring*
- *Insights to be gained...*
 - *Specific device strategy to assess*
 - *Selection of valuation and comparison metrics*
 - *Identification of critical questions to address in Phase 3*

Sample methodology: segmentation analysis can identify subgroups which need to be managed differently

Example: Flu Antiviral Market Segmentation

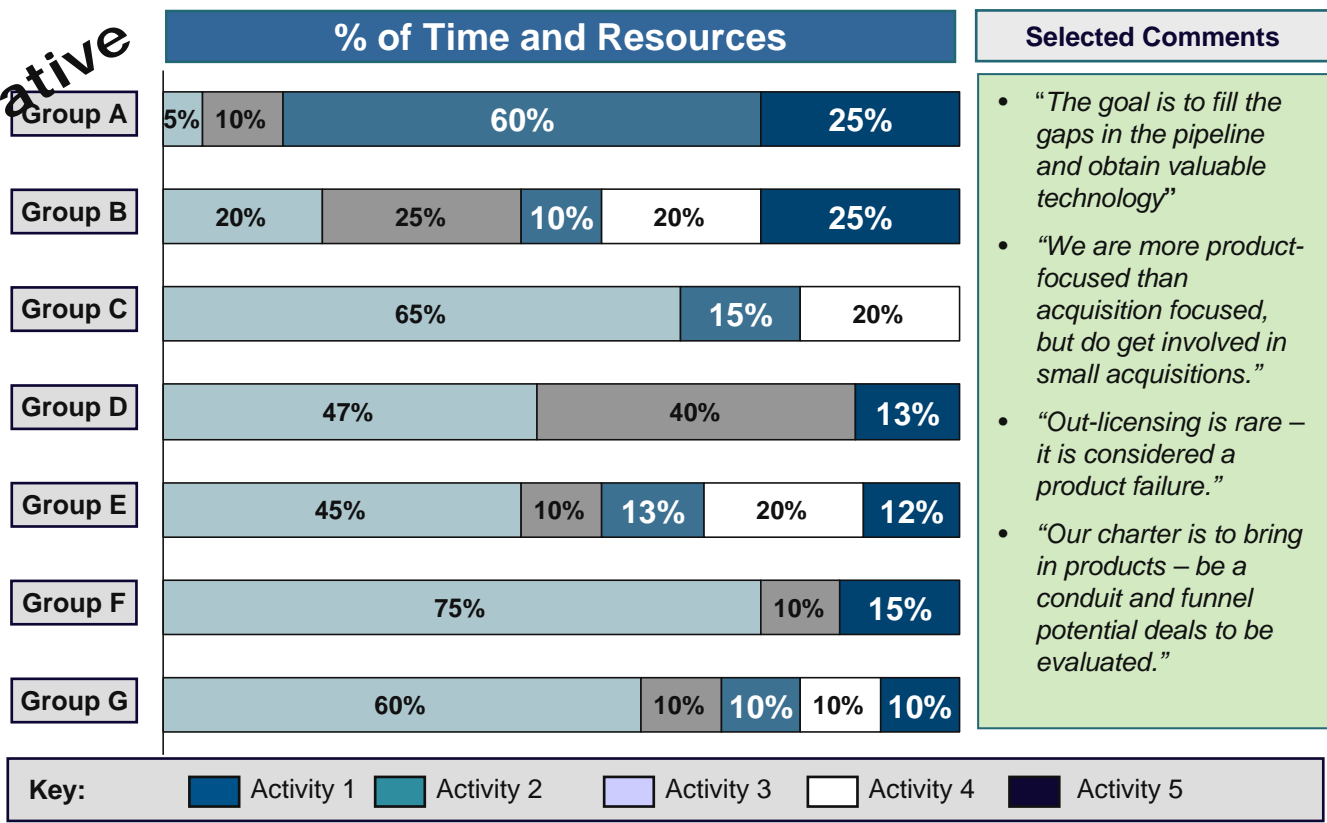
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Sample methodology: behavioral mapping allows to compare differences in behavior/opinions between related groups

Example: Activity Focus of Internal Business Development Groups

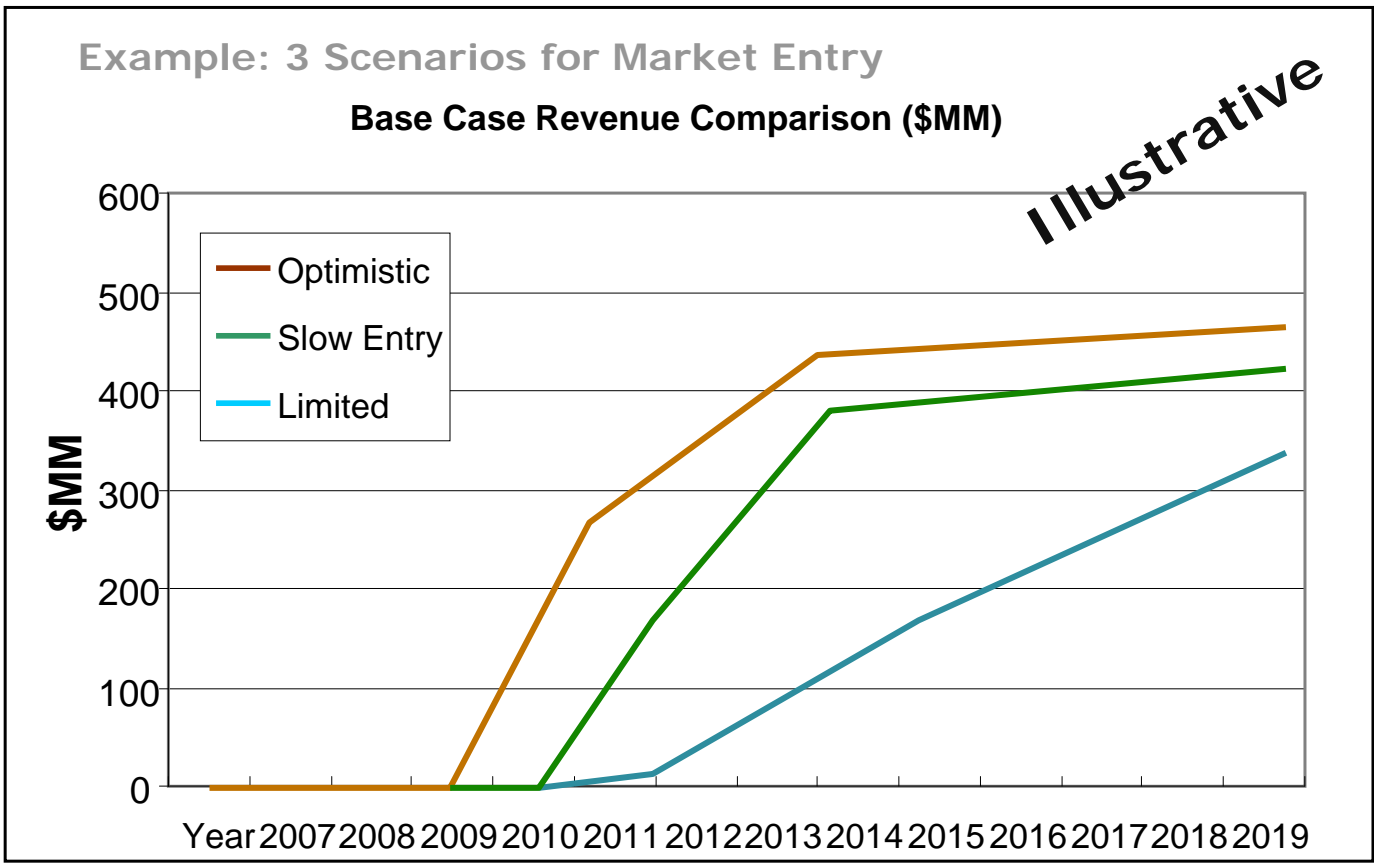
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Phase 3: "Consolidate"

- Deliverables will include...
 - A forecast and range of the device opportunity, by country
 - Risk assessment and sensitivity analysis, including the identification and impact of key inputs
 - Highlights and analysis regarding potential influences and drivers
- Insights to be gained...
 - Go/No Go on investments
 - Strategy details to optimize specific device development
 - Broader entry beyond 5 selected countries of analysis

Sample methodology: forecast outputs can display and compare various impact metrics by country, by segment, and across scenarios



Sample methodology: tornado charts and other risk analysis displays will help uncover the most-impactful elements

Example: New Drug Opportunity for CLL

Sensitivity Analysis displays the potential effect of different inputs on key value metrics.

