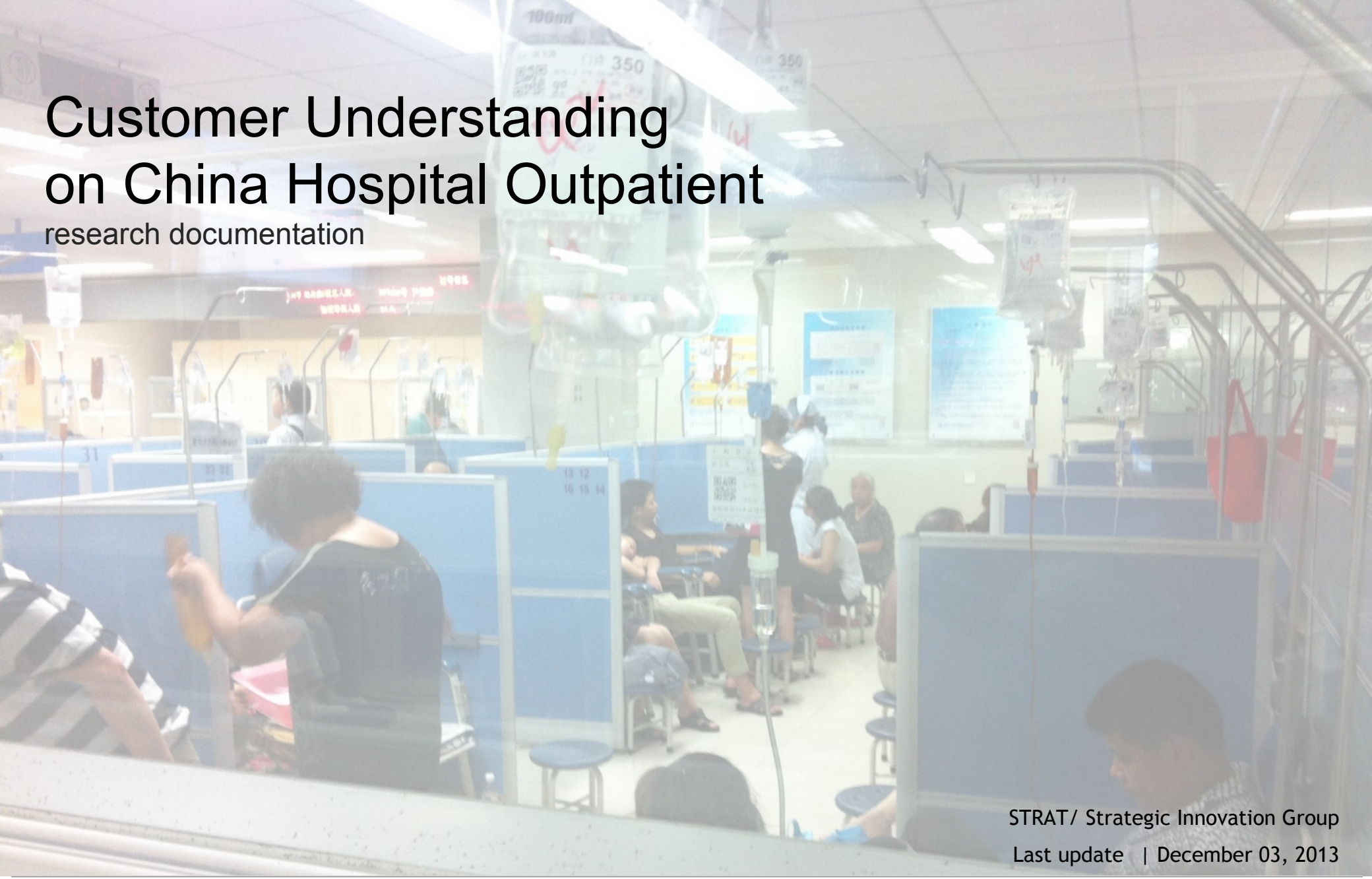
Customer Understanding on China Hospital Outpatient

research documentation



STRAT/ Strategic Innovation Group

Last update | December 03, 2013

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Content

Project Phases

Phase 1 - Module 1 (Pre Visit)

Background – Objectives/ Process/ Team/ Considerations
Customer Visit Matrix
Observation Methodology
Team Members' roles, responsibilities and research tools
Research Tools

- Preliminary Baseline Workflows (for 3 innovation spaces)
- Preliminary In-Depth Interview discussion guides
- Observation Guides
- Intro to Ethnography / On-site interview guide

Phase 1 - Module 2 (Visit)

Raw research notes and a/v recordings/ pictures (if possible)
Mind maps containing 4P's, key insights and root cause analysis
List of problem statements
Identify common problem themes

Phase 1 - Module 3 (Post Visit)

Need statements output
Outcome Driven Innovation (ODI) Vector questions for customers (for survey, if needed)
Revised baseline workflow
Additional customer workflow/ job maps (if needed)

Appendix

- Other Considerations
- BD China – Setting up visits and On-site interviews
- Sample Customer Visit Schedule
- Team Set-up and Travel Expenses
- Risk and Mitigation

Project Phases

Legend :

- STRAT Team Review
- SIG Leadership Review
- Inform SIG Leadership
- Time Frame

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Background

Objectives

- Identify stakeholders and their high-level needs within Outpatient Infusion Centres, Outpatient Pediatric Infusion and Outpatient Chemotherapy. e.g. patients, nurses, doctors, pharmacy and purchasing etc.

- Discover what problems, if any exist within their current process of medication delivery and any pre/post procedures associated with it.

- Discover current environmental variables – cost constraints, equipment, regulatory constraints etc.

- Discover something currently unknown about them – their experience, behaviours, motivations, needs – also trends and behavioural changes

Background

Process

1. Observation and in-context interview (e.g. typical shadowing approx. 3-4 hours in a department)
    - 4P's & Key insights [People (stakeholders), Place (environment), Product and Process (before, during and after medication delivery)]

2. Discussion on key insights with patients interacting stakeholders i.e. nurses, attending physicians (30 mins)
    - Discuss and verify observations of 4P's
    - Discuss and verify key insights gathered from observations

3. Debrief after each visit (30mins within Team)
    - Download/capture and document key insights from each visit/ interviews ready for analysis and needs statement development

4. In-depth interview (60 mins per stakeholder)
    - Discuss and verify observations of 4P's
    - Discuss and verify key insights gathered from observations

Background

Team

- 2-5 from BD Singapore – Strategic Innovation (STRAT)
- Facilitated by BD Country/ Province representative
- Hospital visits arrangement by BD China – Timothy Lee, Tao Lan

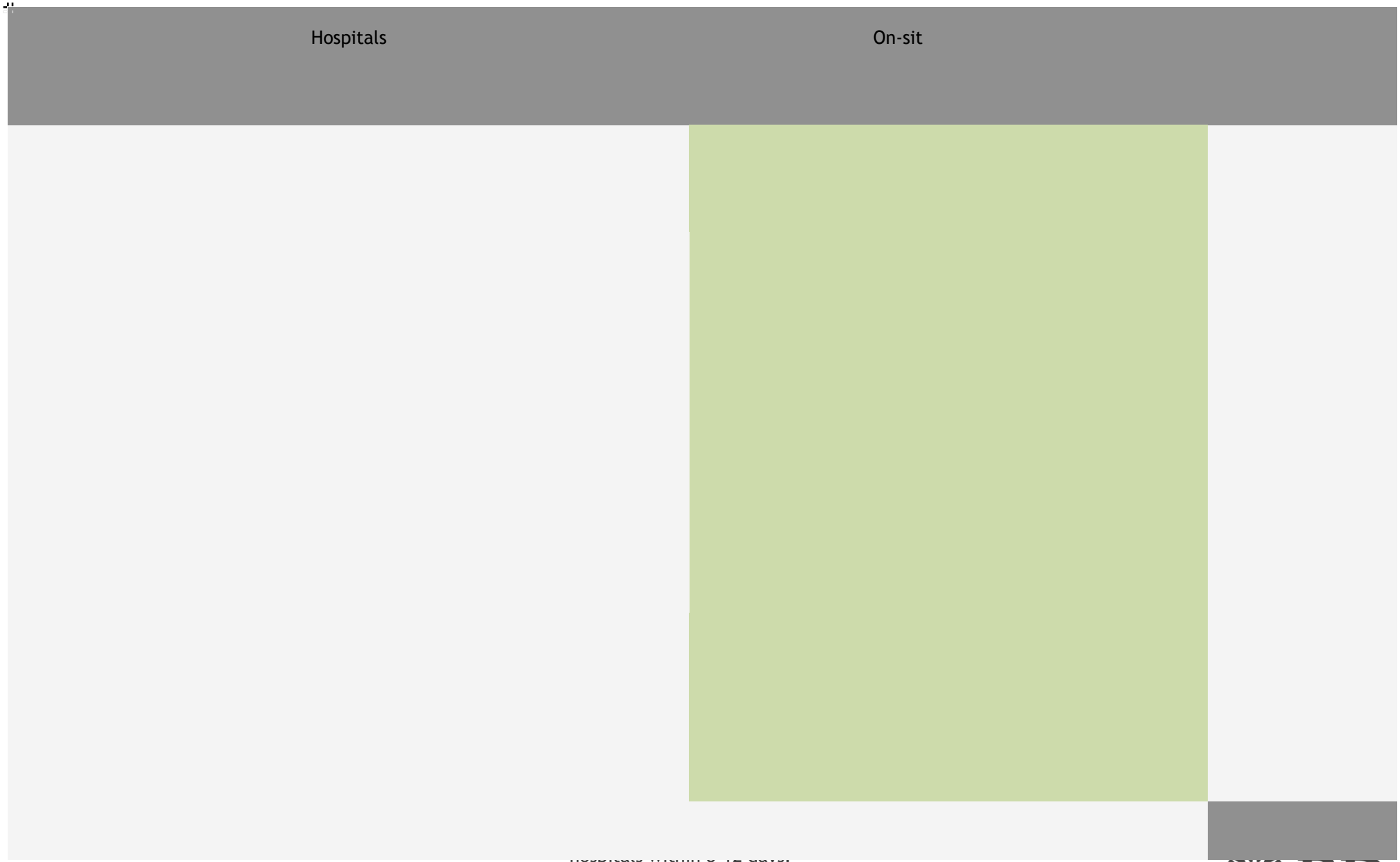
Considerations

1. Given the budget, time and efficiency, planned locations should be within 4-hour travelling distance, targeting Tier 1 cities such as Beijing, Shanghai or other top tier cities. (city tier as per BD CenterPoint)

2. A selection of class 3 public hospitals within the city and a couple of class 2 public hospitals in the peripheral of top tier cities to cover a wider sampling. This is because >80% of the outpatient flow go to hospitals of Class 2 & above, and around 90% of patient flow goes to public hospitals.

3. A TCM (Traditional Chinese Medicine) hospital visit is planned for the OPIC-focused topic to eliminate the current blind spot on TCM hospitals. Some information suggests that TCM infusion accounts for ~40% of the total infusion in general hospitals.

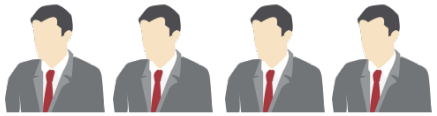
Reference:
- 2011 China's Best Hospital Management Institute, Fudan University
- 2011 MedSci.cn website hospital ranking


Hospitals
On-sit

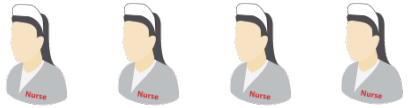
On-site interview at a glance

Key Stakeholders

1. Hospital CEO — 0
2. Nurse Director — 4



3. Head nurse of outpatient — 4



4. Head outpatient physician — 4

5. Head of purchasing department — 4

Patients interacting stakeholders

1. OPD Nurse — 14

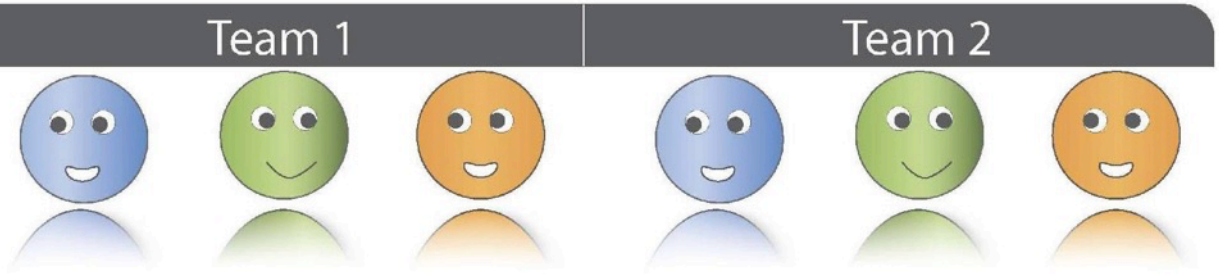
2. OPD Physician — 6

Notes: A total of 38 interviews are expect be conducted in 7 hospitals within 8-12 days.

Observation Methodology

Observation Team

2 Teams of
2-3 people
(inclusive of country rep)



Observation Type

Understand the overall ecosystem of patient care in all 3 spaces from 2 perspectives,
(patient journey & outpatient nurse daily work shift journey)

Patient Journey

Approach :
Team 1 will start observation study by immersing into a patient journey from the moment she/he steps into the hospital outpatient department to the moment she/he leaves the hospital, understanding the overall hospital's patient care ecosystem from a patient perspective and the pain points encountered by the patient.

Areas to cover during observation:
registration at reception, consultation with physician, lab test process, pharmacy dispensing process, treatment process and follow up process.

Possible Scenario :
Throughout the entire patient journey, if observer(s) feels there is a need to further understand a particular process, say pharmacy dispensing medicines to patient, one observer should probe into it while the rest follow on with patient.

duration	no. of patients/ visit
3-4 hours	02
considerations	
observe patients of different demographic and disease profiles if possible	

Outpatient Nurse Daily Work shift Journey

Approach :
Team 2 will start observation study by shadowing **outpatient nurse* in her/his work environment (reception, consultation room, pharmacy, treatment area etc.), immersing in their daily jobs and gain insights into the hospital's patient care ecosystem and the pain points encountered by the nurses.

Areas to cover during observation:
start-shift preparation, in-shift work processes such as patient registration, triaging, treatment preparation, insertion/infusion treatment, patient monitoring, documentation, shift hand over and other ad-hoc duties.

Possible Scenario :
Throughout the entire nurse work shift journey, if observer(s) feels the need to interact with other stakeholders such as physicians, patients, technicians etc., one observer should connect and empathise to gain additional insights.

duration	no. of nurse/ visit
3-4 hours	all type of outpatient nurses
considerations	
observe nurses of a variety in terms of different demographics and years of experiences if possible	

*outpatient nurse – including counter registration nurse, triage nurse, treatment nurses (injection/ infusion), pharmacy nurses etc.

Legend : (Lead) Observer, Observer, Country Representative

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Observation Methodology

Likely Schedule

potential schedule of an observation visit to hospital in a day

schedule of observation visit

Time	Team 1	Team 2	Remarks
7.45 a.m	**travelling to hospital** arrive 15 mins earlier than scheduled time		find parking, "check in" with security, meet your point of contact (country rep) and etc.
8.00 a.m	**introduction**		get to know each other, objective of study, get permission to take photos, videos, voice recording etc.
10.00 a.m	assign by hospital to follow 1st patient on his/ her treatment seeking journey, **start shadowing**	assign by hospital to follow an outpatient nurse on his/ her workstream **start shadowing**	highly dependent on patient's treatment plan and nurse's shift schedule
	1st patient exits hospital **end shadowing**	**end shadowing** **on-site interview** (if planned)	
noon	**lunch break**		if nurse goes for lunch/ tea break, try to follow and engage in short conversation to understand their stresses and desires in their job
1.00 p.m	**start shadowing** on 2nd patient	**on-site interview** (if planned)	
3.00 p.m	2nd patient exits hospital **end shadowing**	follow 2nd & 3rd outpatient nurse on his/ her workstream **start shadowing** **end shadowing**	highly dependent on patient's treatment plan and nurse's shift schedule
5.00 p.m	**on-site interview w/ attending physician, nurses** (if planned)		
5.30 p.m	**de-brief**		discuss key insights observed and take notes when the images are still fresh in the mind. strategise next visit.
6.00 p.m	**dinner**		

assumptions : 1 both teams start observation in the same hospital at the same time
2 team 1 is able to observe 3 patients' journeys

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2 team 1 is able to observe 3 patients' journeys

Observation Team Members' roles, responsibilities and research tools

Roles	(Lead) Observer	Observer	Country Rep.
Responsibilities	> observe and take descriptive notes based of [1]4P's > take pictures, short videos when descriptive notes are insufficient *(attain permission first before study and do not be intrusive)* > connect and engage with [2]end users *(build rapport and empathy)* > probe further when notice unusual behaviour or practice. *(do not overdo it so as to not impose on end user real working situation)* > collate all data collected for further analysis > take notes when the other observer is conversing with end user.	> observe and take descriptive notes based of [1]4P's > take pictures, short videos when descriptive notes are insufficient *(attain permission first before study and do not be intrusive)* > connect and engage with [2]end users *(build rapport and empathy)* > probe further when notice unusual behaviour or practice. *(do not overdo it so as to not impose on end user real working situation)* > take notes when the other observer is conversing with end user. [3]*possible language barrier* > note down questions if observe unusual behaviour or practice	> connect and introduce observers to end users > intervene with product knowledge and language expertise when necessary *(if country rep. is present throughout the observation study)*
Research Tools	1 camera phone 2 small *(A5 or smaller)* note book and pen 3 casual attire *(no business attire, blend in)*	1 camera phone 2 small *(A5 or smaller)* note book and pen 3 casual attire *(no business attire, blend in)*	

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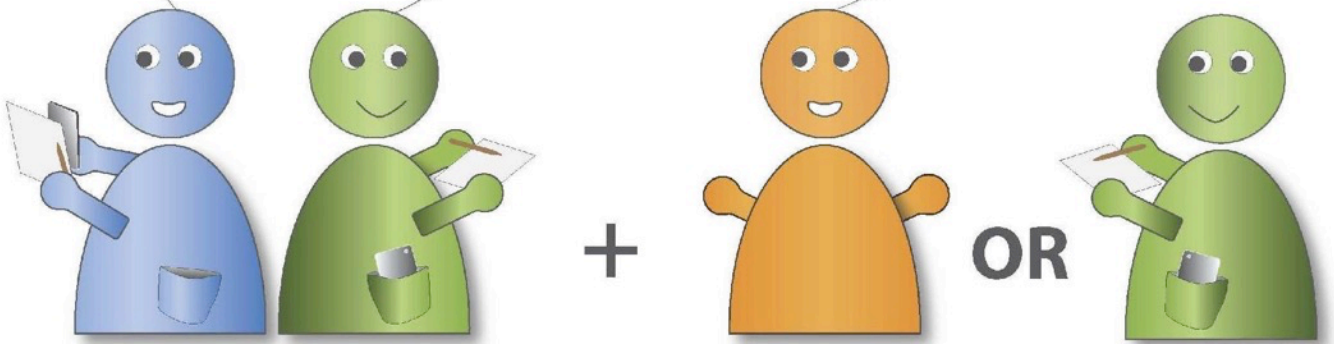
maximum
3 people
per team



Note: 2 teams of 2-3 people from STRAT

1. 4P's - Process, People, Products, Place (a A5 size observation template can be used)
2. end users - Physicians, nurses, other workers who have interaction with the patient
3. Possible language barrier - In China hospital s where Mandarin Chinese will be the predominant language usage, interactions between observer and end user will be greatly reduced if observer do not speak their language.

Legend : (Lead) Observer; Observer; Country Representative

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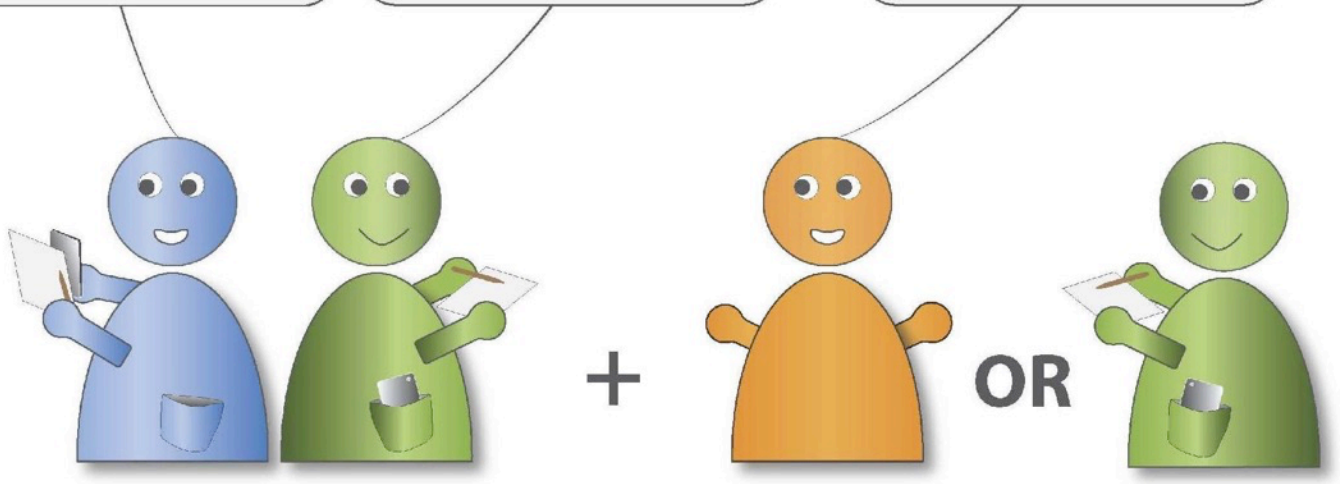
Interviewing Team Members' roles, responsibilities and research tools

Roles	Interviewer	Note Taker	Country Rep.
Responsibilities	> ask questions based on interview discussion guide > take notes if Note Taker is non-mandarin listener **only for relevant stakeholders** > share preliminary baseline workflow and get opinion on that > discuss about insights observed in previous studies > probe further to understand underlying meaning	> take notes of interview > audio record interview > aware of emotional cues shown by interviewee and note them down > tidy up notes and transcribe into digital format	> connect and introduce interviewers to stakeholders > provide translation whenever necessary
Research Tools	1 small *(A5 or smaller)* note book and pen 2 discussion guide *(refer to it occasionally)* 3 casual attire *(no business attire, blend in)*	1 device for audio recording 2 small *(A5 or smaller)* note book and pen 3 discussion guide *(intervene if interview goes off track)* 4 casual attire *(no business attire, blend in)*	1 device for audio recording 2 small *(A5 or smaller)* note book and pen 3 discussion guide *(intervene if interview goes off track)* 4 casual attire *(no business attire, blend in)*

maximum
3 people
per team



Note: 2 teams of 2-3 people from STRAT

Legend :
- Interviewer
- Note Taker
- Country Representative

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Research Tools

Preliminary Baseline Workflows
(for 3 innovation spaces)

Chinese version

Preliminary In-Depth Interview discussion guides

Interview Questions – Master list and Guides

On-site Interviews	
Interviewees	Discussion Guides
Key Stakeholders 1. Hospital CEO 2. Nurse Director 3. Head nurse of outpatient 4. Head outpatient physician 5. Head of purchasing department	NA
Patients interacting stakeholders 1. OPD Nurses 2. OPD Physicians	

Research Tools

Observation Guides – 4P's template

Intro to Ethnography / On-site interview tips

Appendix

Other Considerations

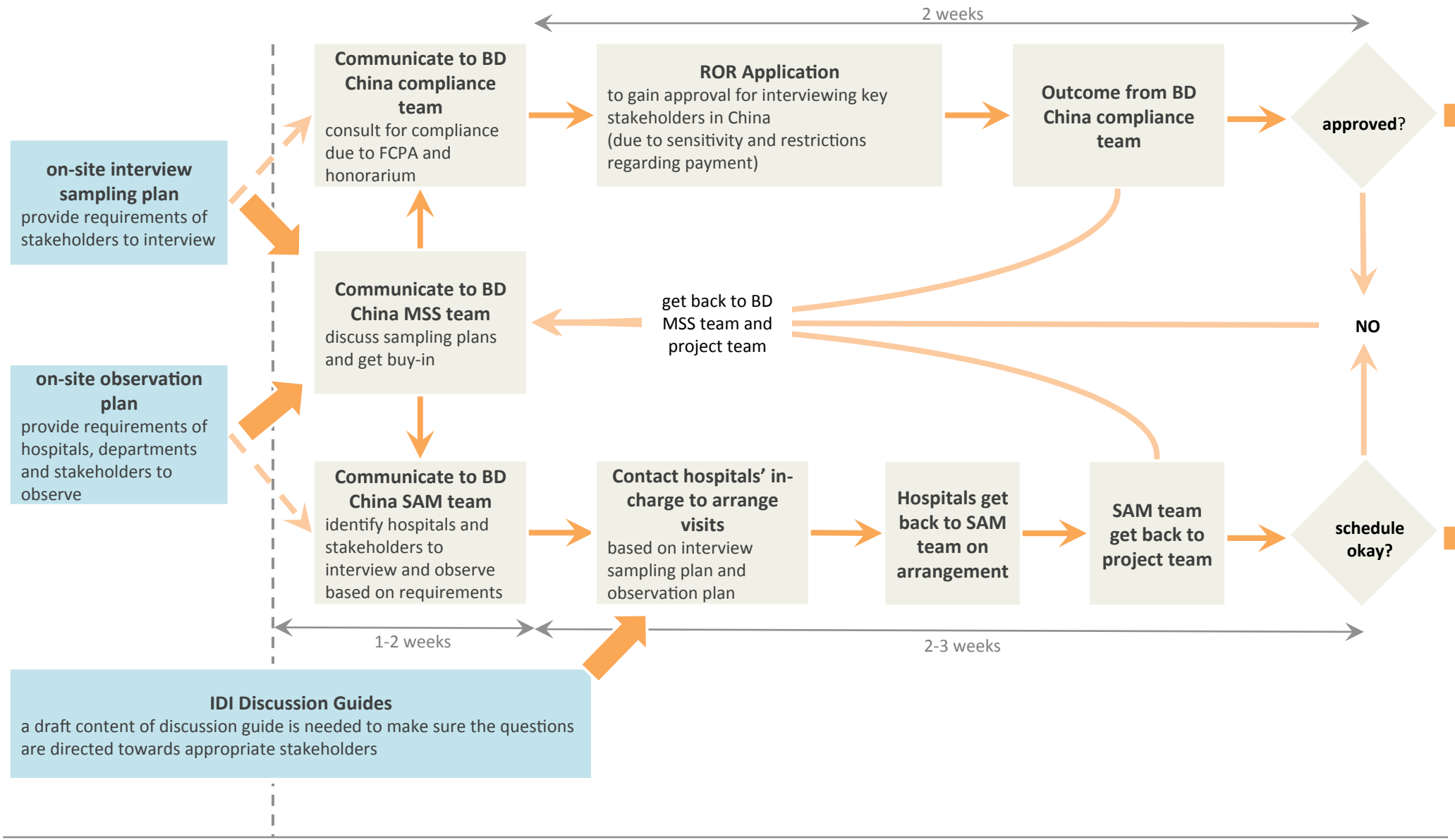
- **On-site interviews**
  always ready to go into an impromptu conversation with the nurses whenever they have time (even if is 10-15 mins) take breaks with them and initial small talks to gain insights into their jobs.

- **Build rapport with sales and marketing reps.**
  spend some time (1hour?) with reps to understand on the hospital before visits.

- **Be sensitive to emotional needs of chemotherapy patients and family members**

- **Take note of China one child policy mentality in parents (pediatric outpatient)**

BD China – Setting up visits & on-site interviews



Customer Visit Schedule

Date	Day	Morning	Afternoon	Evening	Location
12/8	SUN			Arrive in Shanghai	SH
12/9	MON	Observations (1-2 Hosp)			SH
12/10	TUE	Observation (1 Hosp)	Work	Dinner with China team	SH
12/11	WED	Work	Discussion w/ CN Team		SH
12/12	THU	SAM Hospitals			SH
12/13	FRI	SAM + Class II/III			SH
12/14	SAT				SH
12/15	SUN		Travel to Beijing		BJ
12/16	MON	SAM Hospitals			BJ
12/17	TUE	SAM + Class II/III			BJ
12/18	WED	Return to Singapore			BJ
12/19	THU				
12/20	FRI				

Travel Expenses

Team	Airfare	Length of stay (Shanghai)	Length of stay (Beijing)	Shanghai	Beijing
Wei Chung	2000	7	3	2100	1200
Yongdan	2000	7	3	2100	1200
Purna	1650	6		1800	
Toe Toe	1650	4		1200	
Bernard	1650		3	0	1200
Total	8950			7200	3600
Grand Total	**19750**	**All currency in SGD**		**300**	**400**
				(Estimated lodging, transport and food costs)	

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Risk and Mitigation

Risk	Impact	Mitigation
Delay in recruitment	(impact on project timeline-timeline could get extended)	▪ [1]BD China MSS shall notify [2]SIG in advance on the dependencies. The same shall also be captured in the weekly working committee meeting and communicated during conference calls. ▪ Efforts will be taken by working committee to expedite the process and try to minimize the impact on timeline. ▪ Update [3]Steering Committee during steering committee meeting on expected delay.
Delay in getting ROR approvals for the onsite research	(impact on project timeline-timeline could get extended)	▪ [1]BD China MSS shall notify [2]SIG in advance on the dependencies. The same shall also be captured in the weekly working committee meeting and communicated during conference calls. ▪ Efforts will be taken by working committee to expedite the process and try to minimize the impact on timeline.
Delay in conducting onsite observations and interviews on time due to challenges in getting permissions from hospital authorities for conducting research	(impact on project timeline-timeline could get extended)	▪ [1]BD China MSS shall notify [2]SIG in advance on the dependencies. The same shall also be captured in the weekly working committee meeting and communicated during conference calls. ▪ Efforts will be taken by [1]BD China MSS to approach other hospitals to recruit respondents to expedite the process and try to minimize the impact on timeline. ▪ Update [3]Steering Committee during steering committee meeting on expected delay.

Risk and Mitigation

Risk	Impact	Mitigation
Delay in conducting onsite interviews on time due to last moment dropouts of recruited respondents	 (impact on project timeline-timeline could get extended)	▪ [1]BD China MSS shall notify [2]SIG in advance on the dependencies. The same shall also be captured in the weekly working committee meeting and communicated during conference calls. ▪ [2]SIG and [1]BD China MSS will work together to recruit additional respondents for backup to address this situation, hence minimizing the impact on timeline
Delay in identifying and interviewing KOLs	 (impact on project timeline-timeline could get extended)	▪ [1]BD China MSS shall notify [2]SIG in advance on the dependencies. The same shall also be captured in the weekly working committee meeting and communicated during conference calls. ▪ [2]SIG and [1]BD China MSS will work together to multi-source KOLs using Guidepoint, CBi and BD China contacts
Credibility of secondary data sources	 (impact on accuracy n secondary research)	▪ [2]SIG to multi-source and tap on [1]BD China MSS and functional experts. ▪ [1]BD China MSS to assist in linking [2]SIG to BD China and functional experts.
Travel restrictions	 (impact on project timeline-timeline could get extended)	▪ [2]SIG – Toe Toe and Purna to resolve visa issues early. ▪ [2]SIG to adhere to BD Corporate Security Travel Advisories whenever applicable

[redacted]