Example | Use the 3-step framework to inform a TA specific initiative

Immunology
IBD/UC + RA

IMPACT TO PT. & HCP

STEP 01 *MAIN GAPS* → *PAIN POINTS* → *OPPORTUNITIES* → *POSSIBLE SOLUTIONS*

Diagnosis & treatment decisions [Encounter, Follow-up]

Emotional needs [Maintain, Follow-up]

Symptoms tend to get overlooked for years

Concerned of (future) side effect of BIO drugs

Difficulty in communicating symptoms to HCP (embarrassment or hard to describe pain)

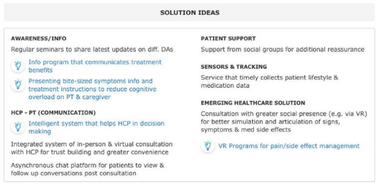
HCP - Pt. communication

Awareness & info

Sensor & patient tracking

Emerging HC solutions

Follow-up



EFFECTIVENESS

STEP 02 *SEGMENTATION DISTRIBUTION* → *SEGMENTATION INSIGHTS* → *INFORM SOLUTIONS*

Autonomy	High
Motive	High*
Receptiveness	Low
Accessibility	High*

Awareness/Info

Centralized information sources, educational programs

Enable easy access to disease-related information for patients and caregivers.

HCP - Pt communication

Build trust with patients

More face-to-face interaction between HCP & Pt to build trust and empathy. Provide alternative sources for patient to access information.

Support group could be helpful.

Info programs that communicates treatment benefits to patients / support group

Presenting bite-sized symptoms info and treatment instructions to reduce cognitive overload

Programs for pain or side effect management

Intelligent system that helps HCP in decision making

IMPACT / FEASIBILITY

STEP 03 *VALUE OUTPUT* → *SOLUTION SELECTION* → *FEASIBILITY* → *SOLUTION TO CONSIDER*

Patient

HCP

JPKK

Info programs that communicates treatment benefits to patients / support group

Presenting bite-sized symptoms info and treatment instructions to reduce cognitive overload

Programs for pain or side effect management

Intelligent system that helps HCP in decision making

Existing

Janssen solution

Off the shelf

Enhancement

Heavy integration

Novel solution

Programs for pain or side effect management + Info program that communicate treatment benefits to patients/support group. E.g.:

Bold.health – digital therapeutics

XRHealth – targeted VR program

AppliedVR – training program

Example | Step 01: Define the problem space

STEP 01 *MAIN GAPS*

Diagnosis & treatment decisions [Encounter, Follow-up]

Emotional needs [Maintain, Follow-up]

Map out the TA-specific patient journey (key events, emotion & mindset) and **identify the main gaps**. The first layer of decision making is choosing the best problem (gap that brings about the most opportunities) to solve.

Immunology example: Diagnosis & treatment decision [Encounter, Follow-up] affects both patient & HCP. Hence gives the business team more opportunities to ideate for impactful solutions.

Example | Step 01 (cont.): List out pain points & opportunities

STEP 01

MAIN GAPS → *PAIN POINTS* → *OPPORTUNITIES* → *POSSIBLE SOLUTIONS*

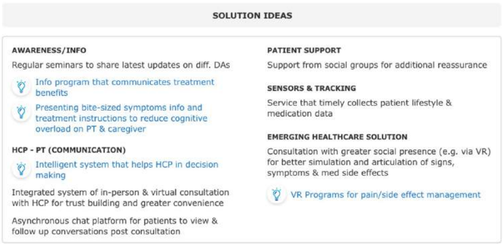
Diagnosis & treatment decisions [Encounter, Follow-up]

Emotional needs [Maintain, Follow-up]

- Symptoms tend to get overlooked for years
- Concerned of (future) side effect of BIO drugs
- Difficulty in communicating symptoms to HCP (embarrassment or hard to describe pain)

- HCP - Pt. communication
- Awareness & info
- Sensor & patient tracking
- Emerging HC solutions

Follow-up



Map out the TA-specific patient journey (key events, emotion & mindset) and **identify the main gaps**. The first layer of decision making is choosing the best problem (gap that brings about the most opportunities) to solve.

Immunology example: Diagnosis & treatment decision [Encounter, Follow-up] affects both patient & HCP. Hence gives the business team more opportunities to ideate for impactful solutions.

In the chosen gap (Immunology e.g.: Diagnosis & treatment decision), list down the **pain points** in detail and identify **possible opportunity areas**. You may refer to the [PT journey map] or [Gaps/Opportunity summary] for more details.

There are some high-level solutions in the journey map. You **may ideate for more detailed solutions.** Don't worry if it's messy at first, you'll start to see patterns, then map the solutions out under the opportunity areas.

This little divergence activity gives us more room for choice and consideration.

Example | Step 02: Use segmentation to further inform solutions

STEP 01 MAIN GAPS → PAIN POINTS → OPPORTUNITIES → POSSIBLE SOLUTIONS

STEP 02 SEGMENTATION DISTRIBUTION → SEGMENTATION INSIGHTS → INFORM SOLUTIONS

Autonomy	High
Motive	High*
Receptiveness	Low
Accessibility	High*

Awareness/Info

Centralized information sources, educational programs

Enable easy access to disease-related information for patients and caregivers.

HCP - Pt communication

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Programs for pain or side effect management

Intelligent system that helps HCP in decision making

Map out the TA-specific patient journey (key events, emotion & mindset) and identify the main gaps. The first layer of decision making is choosing the best problem (gap that brings about the most opportunities) to solve.

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There are some high-level solutions in the journey map. You may ideate for more detailed solutions. Don't worry if it's messy at first, you'll start to see patterns, then map the solutions out under the opportunity areas.

This little divergence activity gives us more room for choice and consideration.

Now, let's bring **patient segmentation** into the picture, it enables business teams to be precise in helping patients with specific needs & goals, and prepare more efficient solutions.

What are the main segmentation distribution for this TA and problem space? Use **data** to drive your decisions here. Refer to page 25 for insights on segmentation.

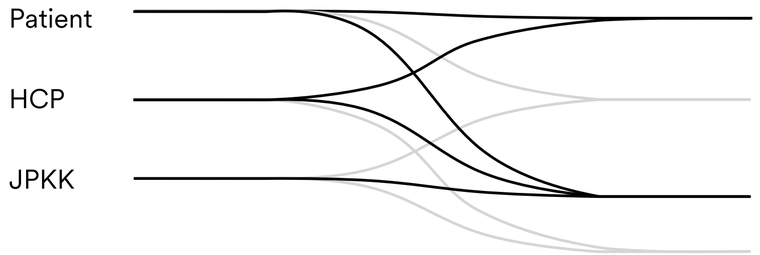
Use segmentation insights to filter the solutions and make them more specific. For example, an "Info program" that targets both the patient and support group might be helpful, especially when receptiveness is low.

Example | Step 03: Prioritize solutions by value output & feasibility

STEP 01 MAIN GAPS → PAIN POINTS → OPPORTUNITIES → POSSIBLE SOLUTIONS

STEP 02 SEGMENTATION DISTRIBUTION → SEGMENTATION INSIGHTS → INFORM SOLUTIONS

STEP 03 VALUE OUTPUT → SOLUTION SELECTION → FEASIBILITY → SOLUTION TO CONSIDER



Info programs that communicates treatment benefits to patients / support group

Presenting bite-sized symptoms info and treatment instructions to reduce cognitive overload

Programs for pain or side effect management

Intelligent system that helps HCP in decision making

Existing
Janssen solution
Off the shelf
Enhancement
Heavy integration
Novel solution

Programs for pain or side effect management + Info program that communicate treatment benefits to patients/support group. E.g.:

Bold.health – digital therapeutics

XRHealth – targeted VR program

AppliedVR – training program

Map out the TA-specific patient journey (key events, emotion & mindset) and identify the main gaps. The first layer of decision making is choosing the best problem (gap that brings about the most opportunities) to solve.

Immunology example: Diagnosis & treatment decision [Encounter, Follow-up] affects both patient & HCP. Hence gives the business team more opportunities to ideate for impactful solutions.

In the chosen gap (Immunology e.g.: Diagnosis & treatment decision), list down the pain points in detail and identify possible opportunity areas. You may refer to the [Patient journey map] or [Gaps/Opportunity summary] for more details.

There are some high-level solutions in the journey map. You may ideate for more detailed solutions. Don't worry if it's messy at first, you'll start to see patterns, then map the solutions out under the opportunity areas.

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Now, let's bring patient segmentation into the picture, it enables business teams to be precise in helping patients with specific needs & goals, and prepare more efficient solutions.

What are the main segmentation distribution for this TA and problem space? Use data to drive your decisions here. Refer to page 25 for insights on segmentation.

Use segmentation insights to filter the solutions and make them more specific. For example, an "Info program" that targets both the patient and support group might be helpful, especially when receptiveness is low.

Finally, **evaluate & shortlist** the list of solution based on their value output and feasibility. For example, does the solution give us RWD/RWE? (refer to rubric on page_ for full list of success criteria)

Once the evaluation is done, you may further filter based on **feasibility considerations** – has this been done by Janssen? Does it exist in the market? Is it a simple tactic improvement or does it require group-up development as a novel solution?

Filling the blueprint | What is the shortlisted solution

Immunology
IBD/UC + RA

DEFINE

Therapeutic area
Immunology

Medical condition
IBD/UC, RA

Usage context
-

Pain points
Concerned of (future) side effect of BIO drugs
Difficulty in communicating symptoms to HCP (embarrassment or hard to describe pain)

Opportunities
Awareness & info
HCP – Pt communications
Emerging HC solutions

Patient segment

Autonomy	High
Motive	High
Receptiveness	Low
Accessibility	High

Main gap Diagnosis & treatment decisions

Solution Programs for pain or side effect management + Info program that communicate treatment benefits to patients/support group.

Implementation
Janssen solution + enhancement

Program with pain management feature, informational and structured content

Scale
Patients facing
Cross-TA (e.g.: in oncology or PH)
Country-specific (language & culture)

Functional process
- HCP introduce the software to patient during consultation
- HCP walk patient through the set up process
- System record patient information (including symptoms) prior to the program
- Patient participate in the program
- Patient receives regular reminder
- Program collects mini datapoints from patient during the intervention
- Solution collects & consolidate the data towards the end of intervention period
- HCP receive insight report based on the data
- HCP re-evaluate patient status and suggest relevant treatment options to patient

Other solution in the ecosystem
Intelligent system that helps HCP in decision making

Virtual HCP – Pt. communication feature

SPECIFICATIONS

Technology
-

Sensor type
-

Connectivity
-

Device / Model
-

Areas of interest
-

RWD
- -
- -
- -

Measurement process
-

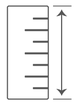
Outcome measures
-

Evidence
MAF -
R&D
CE
MSL

Deployment operations
Action item

Resource requirements
-

Example | Specify the data evidence & solution development protocol



Clinical Measures

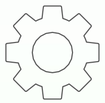
What do you want to measure and why

Identify choice of measure, outcome and data endpoints

Enabling Technologies

What are the right tools for the job

Find the right-fit technology while ensuring safety and efficacy



Deployment Operations

What's needed to deploy remotely and at scale

Define the Jobs-to-be-done during deployment (e.g.: purchase, distribution, monitor, analysis etc)

Example

"RA/UC patients are anxious towards BIO treatment, and have trouble describing symptoms to their HCP; hence it would be helpful to measure their level of treatment literacy and track their symptoms"

"Develop a software application solution on mobile phone, iPad, or even consider using a VR solution"

"Establish a contract with local vendor;
Run a small range test with 100 patients across a few partnering clinics"

Source: Manta C., Patrick-Lake B., Goldsack J.C., 2020, Digital Measures That Matter to Patients: A Framework to Guide the Selection and Development of Digital Measures of Health [source]

Develop clinical measures that matter to patient

CONTEXT EXAMPLE

Immunology (IBD/UC, RA)

Diagnosis & treatment decisions [Follow-up]

Voice of the Patient	Choice of Measure	Meaningful Insight
List out the pain-points experienced by patients	Identify the elements that can be practically measured	Define the measurables affected by the intervention and the data end-points
 “I am anxious about side effects of biological drugs”	Treatment literacy level Discomfort level (Patient-reported) Mindset / openness to treatment	**Outcome:** Disease management improvement **Endpoint:** %++ improvement in literacy level and openness towards BIO drug intervention
 “It is difficult to describe pain-level or embarrassing to discuss the symptoms to my HCP”	Pain / Symptom tracking (e.g. stool patterns & habits)	**Outcome:** Measurable symptom progression **Endpoint:** Regular symptom reporting with unified metrics

Finding the right-fit enabling technology for the purpose

Areas of interest

Literacy level
Mindset/openness
Pain/Symptom tracking

Measurement process

Regular collection of data at different intervals using patient facing software

Outcome measures

Improvement in disease management (% improvement in literacy and openness towards BIO treatment)
Measurable symptom progression with regular unified symptom reporting

Therapeutic area	Immunology	**Sensor type**	Patient reported data
Medical condition	IBD/UC, RA	**Connectivity**	4G/5G, WiFi
Technology	Software application	**Device/model**	
Usage context	Daily or regular reporting Patient active usage & inputs		

Filling the blueprint | How to obtain the data & evidence

Immunology
IBD/UC + RA

DEFINE

Therapeutic area
Immunology

Medical condition
IBD/UC, RA

Usage context
Daily or regular reporting; Patient active usage & inputs

Pain points
Concerned of (future) side effect of BIO drugs
Difficulty in communicating symptoms to HCP (embarrassment or hard to describe pain)

Opportunities
Awareness & info
HCP – Pt communications
Emerging HC solutions

Patient segment

Autonomy	High
Motive	High
Receptiveness	Low
Accessibility	High

Main gap Diagnosis & treatment decisions

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Implementation
Janssen solution + enhancement

Program with pain management feature, informational and structured content

Scale
Patients facing
Cross-TA (e.g.: in oncology or PH)
Country-specific (language & culture)

Functional process
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Other solution in the ecosystem
Intelligent system that helps HCP in decision making

Virtual HCP – Pt. communication feature

SPECIFICATIONS

Technology
Software application

Sensor type
Patient reported data

Connectivity
4G/5G, WiFi

Device / Model
Mobile app
VR program

Areas of interest
Literacy level
Mindset/openness
Pain/symptom tracking

RWD
- Pain/discomfort level
- Frequency of occurrence
- Change of condition
- Proactiveness
- Persuasiveness
- Duration & frequency of visits
- Ease of treatment decision
- Availability of support
- HCP related preference
- Solution rating
- Usage pattern (level of engagement, frequency etc)
- App analytics

Measurement process
Regular collection of data at different time intervals using patient facing software

Outcome measures
Improvement in disease management (% improvement in literacy and openness towards BIO treatment)
Measurable symptom progression with regular unified symptom reporting

Evidence

MAF	Intervention effectiveness on patient segment, level of engagement
R&D	
CE	BIO medication uptake
MSL	Recommendation to HCP

Deployment operations
- [ ] Establish local vendor
- [ ] Contact local clinics & set up pilot plan
- [ ] Fulfil internal regulatory requirements
- [ ] Recruit patient & consent management
- [ ] Conduct pilot test & regular check-ins

Resource requirements
Treatment effectiveness, adherence, intervention result on patient segments

Medication uptake or conversion to LAI

Recommendation to HCP

Filling the blueprint | The complete blueprint example

Immunology
IBD/UC + RA

DEFINE

Therapeutic area
Immunology

Medical condition
IBD/UC, RA

Usage context
Daily or regular reporting; Patient active usage & inputs

Pain points
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Opportunities
Awareness & info
HCP – Pt communications
Emerging HC solutions

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Main gap Diagnosis & treatment decisions

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Implementation
Janssen solution + enhancement

Program with pain management feature, informational and structured content

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Other solution in the ecosystem
Intelligent system that helps HCP in decision making

Virtual HCP – Pt. communication feature

SPECIFICATIONS

Technology
Software application

Sensor type
Patient reported data

Connectivity
4G/5G, WiFi

Device / Model
Mobile app
VR program

Areas of interest
Literacy level
Mindset/openness
Pain/symptom tracking

RWD
- Pain/discomfort level
- Frequency of occurrence
- Change of condition
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- App analytics

Measurement process
Regular collection of data at different time intervals using patient facing software

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Improvement in disease management (% improvement in literacy and openness towards BIO treatment)
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Evidence

MAF	Intervention effectiveness on patient segment, level of engagement
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- [ ] Establish local vendor
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Resource requirements
Treatment effectiveness, adherence, intervention result on patient segments

Medication uptake or conversion to LAI

Recommendation to HCP

Note: This example is speculative and done without direct reach to TA leads – this should be defined by key stakeholders and key users in the initiative