

Dava

A liquid medicine packaging
Individual project
3 weeks | 2021

Designed By
Sumeet Singh



One of the most pressing challenges facing the pharmaceutical industry today is patient compliance

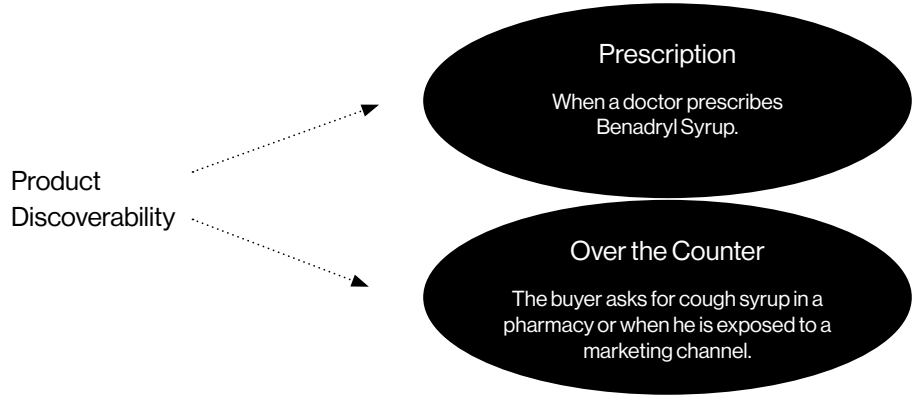
The approach

How to ensure the patient takes the right medicine at the right time in the right way. The impact of poor medication adherence is serious and costly to both patients and the healthcare system.

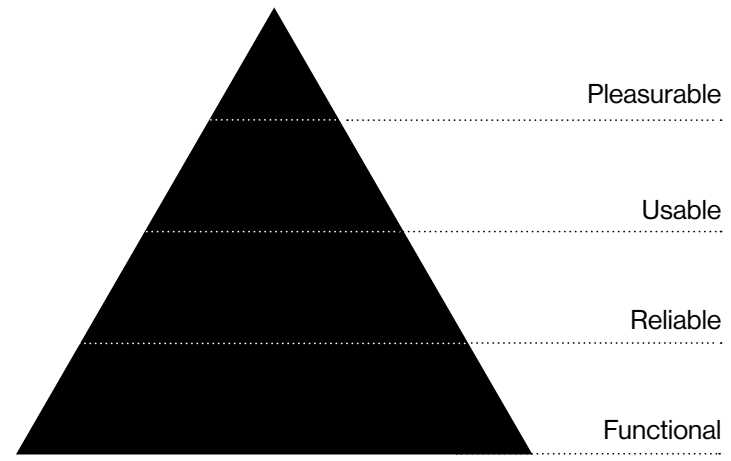
Dava is a liquid medicine packaging which is patient friendly and addresses the problem of self-administration of medicine in developing countries like India, where caregivers are in shortage or patients are in self-quarantine. The design focuses on decreasing the need for fine motor skills and human cognitive load.



Product Discoverability



Human Centered Packaging Design



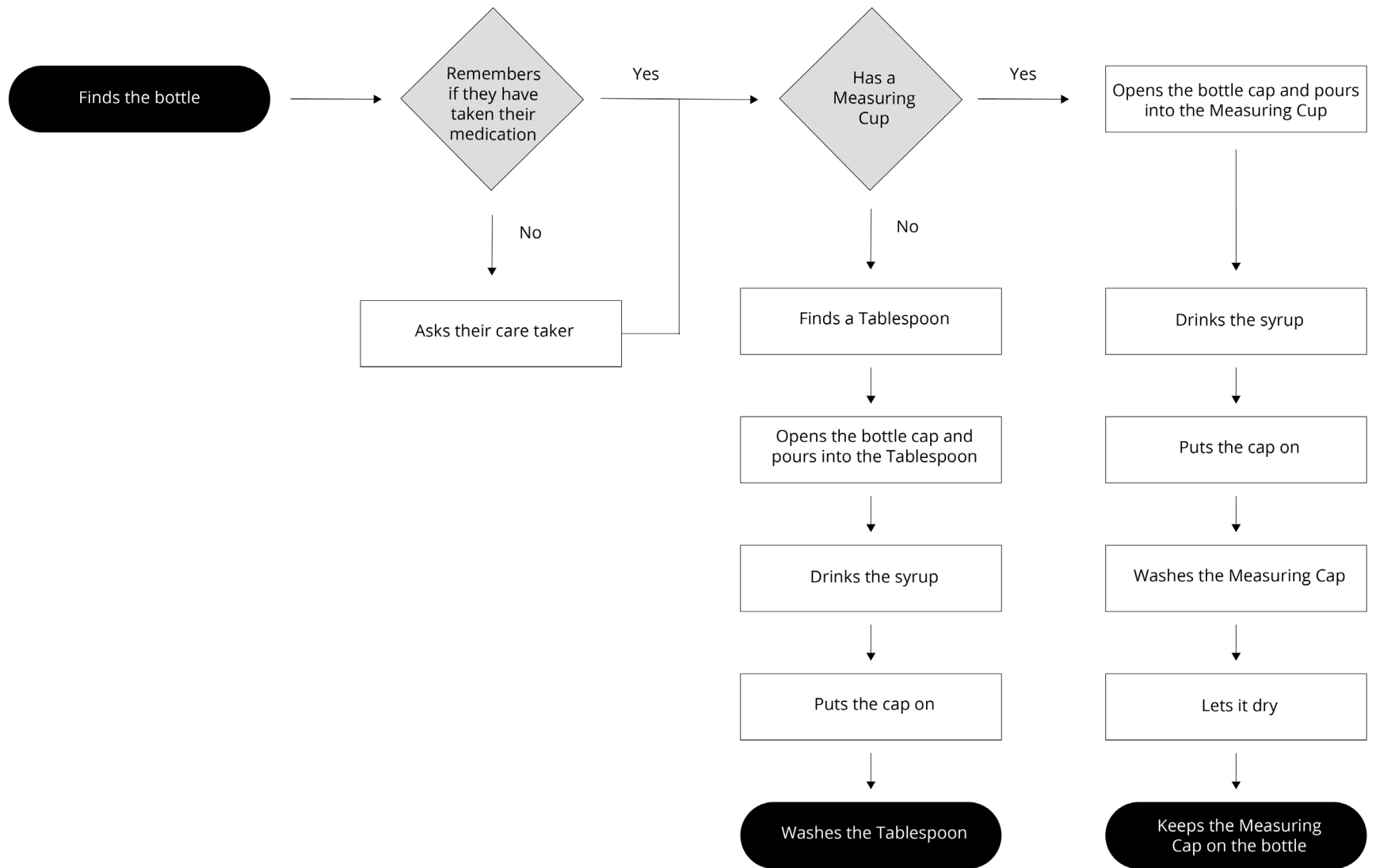
Stakeholders

Primary Use	<ul style="list-style-type: none">• Patient• Family members / caregiver
Secondary User	<ul style="list-style-type: none">• Nurse• Pharmacist
Tertiary User	<ul style="list-style-type: none">• Doctor• Manufacturer

5WH Questions

Why	To make pharmaceutical packs patient-friendly
Who	Patient
What	Primary and secondary packaging
Where	At the place of consumption of the medicine
When	Before consumption
How	By decreasing the need for fine motor skills and human cognitive load

Consumption task flow



Design Brief

To design a liquid medicine packaging which facilitates self administration of medications, requires a lesser degree of fine motor skills and reduces human cognitive load.

Three levels in packaging design intervention

Primary Packaging

The structural design of primary packaging (the container and closure that is in direct contact with the drug).



Secondary Packaging

The structural design of secondary packaging (folding box or bundling box made of carton board).



Graphical Design

The graphical design which is printed or labeled on the primary and secondary packaging.



Areas to work in primary packaging

1. **Opening and re-closing the bottle :** The bottle tends to become slippery because of the medicine on the main cap or accumulation of dried liquid medicine.
2. **The curved shape is hard to read :** Existing pharmaceutical bottles have no flat surfaces and are too narrow for an entire label to be visible at once. Hence, the bottle must be rotated.
3. **Self-administering the exact amount of medicine:** Inaccuracy while pouring due to turbulent and unpredictable flow of fluid.
4. **Lack of inclusivity (elderly & children) :** Act of pouring an exact amount of liquid medicine requires a higher degree of fine motor skills and human cognitive abilities.

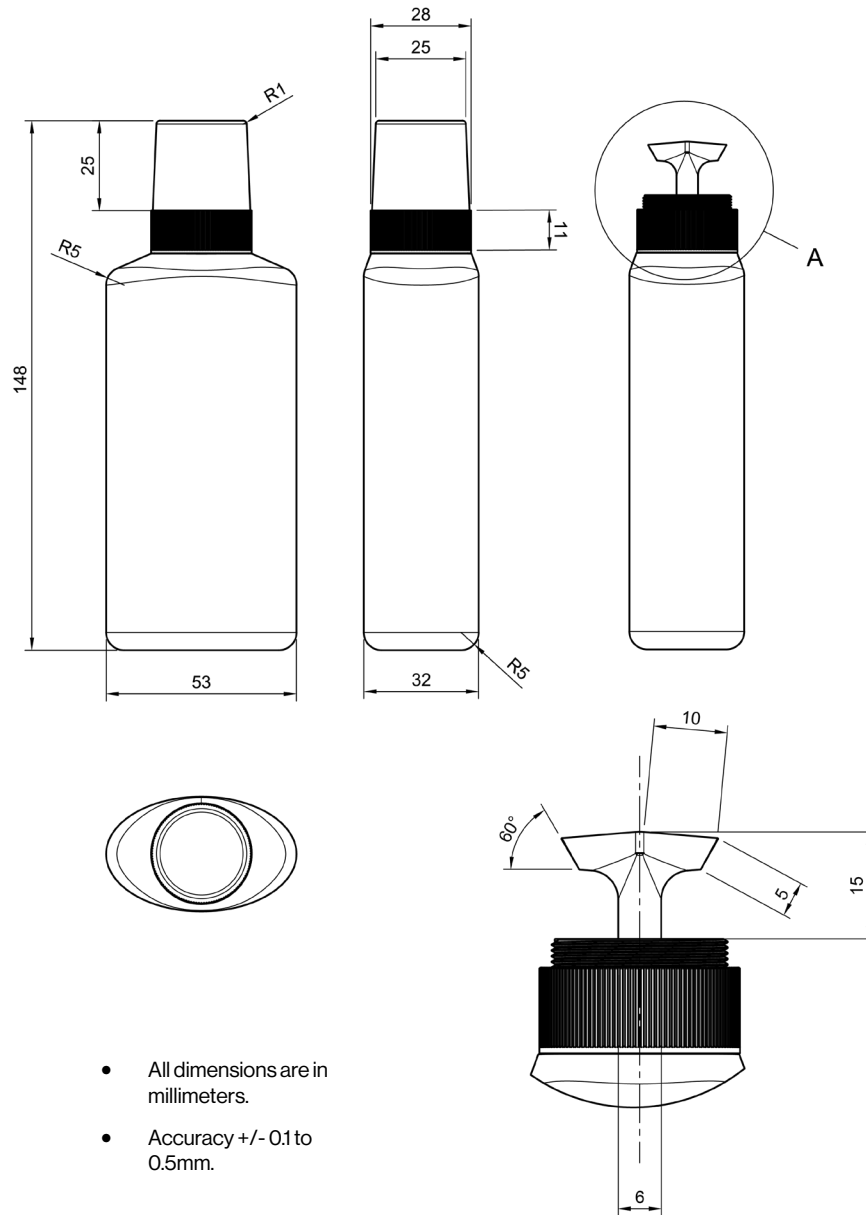
Features in structural design of primary packaging

1. The proposed design has a T-shaped nozzle design which helps in pouring the syrup with better accuracy.
2. It also eliminates the need for two caps, increasing the ease of opening a bottle.
3. The spout has a 60-degree reverse cut angle of the nozzle to avoid dripping.
4. The spout/secondary cap can be used as a retrofit cap for different liquid medicine bottles because of the standard 28mm screw cap.
5. A flat elliptical surface packaging helps increase the readability/visibility of the entire label at once, eliminating the need to rotate the bottle.

Brainstorming



Design Details



- All dimensions are in millimeters.
- Accuracy +/- 0.1 to 0.5mm.

A (2:1)

Measuring cup (PET)

T-shaped nozzle (PET)

Threads

Secondary cap (PET)

Primary packaging
(Amber coloured PET)



Capacity 100ml

Colour Amber

Weight 18g

Material PET Plastic

Shape Elliptical

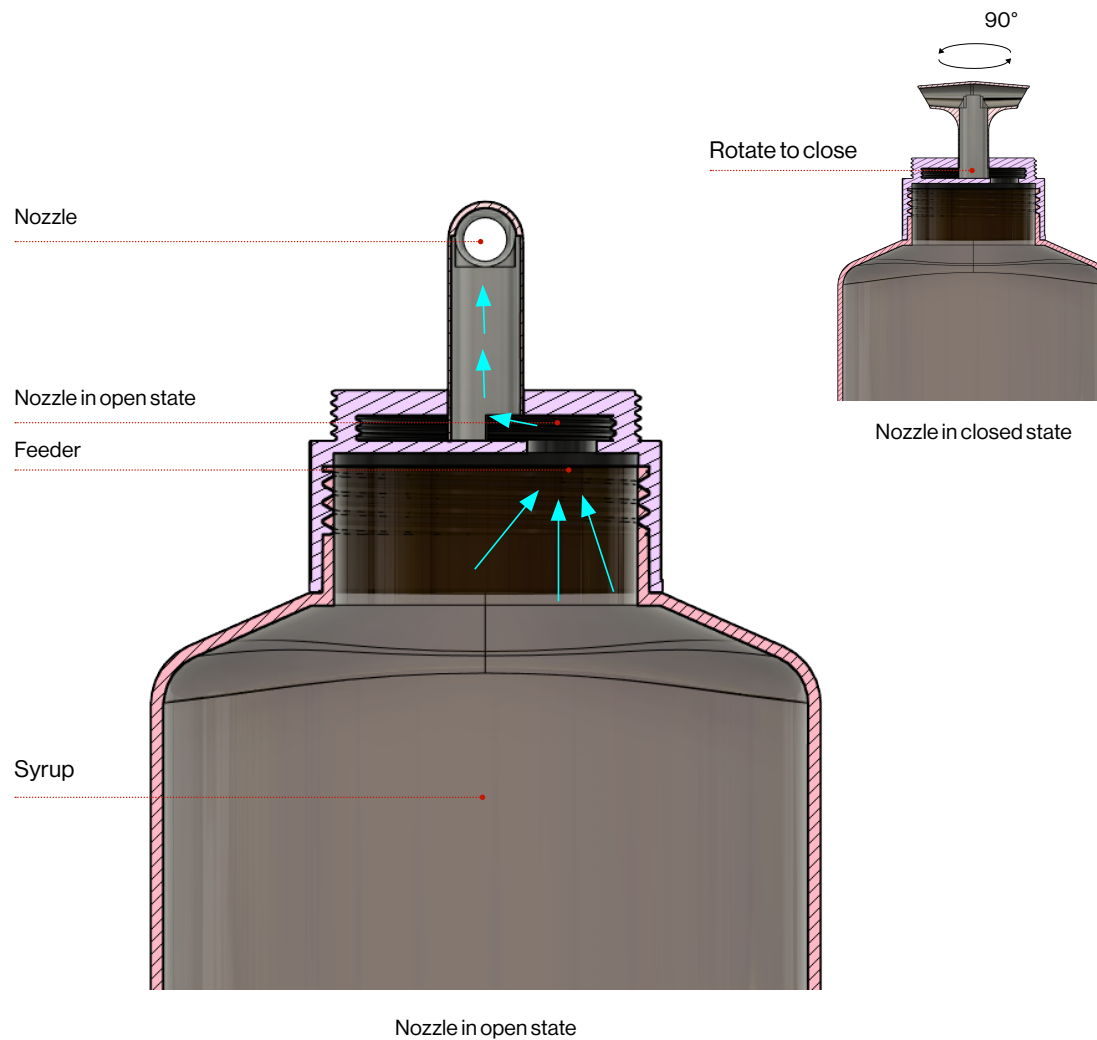
Thickness 1-2.5mm

Product Type with 28 mm screw cap

Concept

The nozzle has a T-shaped design which makes the flow very smooth and predictable. Two holes in a bottle can help the flow of fluids when you are pouring liquid. When you pour liquid from the bottle, it needs to be replaced by air that flows into the bottle. When you have only one hole, the air tries to get into the bottle as the liquid attempts to get out. As a result, the flow of the liquid isn't smooth, and it often leaps over the measuring cup and goes all over the floor.

If you have a hole for the liquid and another hole for the air, then the liquid flows smoothly out of one hole into your measuring cup, whilst the airflow smoothly into the bottle through the other hole.



Steps to pour

1. Unscrew the measuring cup from the bottle.
2. Rotate the nozzle 90 degrees to unlock.
3. Tilt the bottle to pour.
4. Place your finger on the nozzle facing you to manipulate the flow of medicine.

Place your finger to
manipulate the flow

The 60 degree reverse cut angle
of the nozzle to avoid dripping





Dava
Cough Formula

Diphenhydramine Hydrochloride
Ammonium Chloride, Sesquioxide
Citrate & Ethanol 5%



Dava

Cough Formula

Diphenhydramine Hydrochloride,
Ammonium Chloride, Sodium
Citrate & Ethanol Syrup

Areas to work in graphical design

1. **Inconsistency in the placement of details :** The manufacturing details/numbers floating in space, also inconsistency in the placement of manufacturing details, expire and MRP of the medicine throw different brands.

2. **Lack of inclusivity :** Colour blindness, reading difficulties and language barriers.

Features of new graphical design

5. **Paper Finish :** Paper with a glossy finish can lessen legibility because of glare.

7. **Use of colour :** To identify products, highlight key elements of text, contrast for readability.

6. **Type style :** Use of sans serif fonts providing consistent letter contrast to aid reading acuity and efficiency.

8. **Intuitive information architecture of the label :** Making it easy to understand and read.

Areas to work in secondary packaging

1. **Remembering to take the medicine on time :** At the moment taking medication becomes second nature and the memory of taking medicine remains in short term memory.

3. **Lack of health literacy :** Patients must interact with the package to gain access to the medication, the pack itself offers a daily opportunity to educate them about how to take their medication as prescribed.

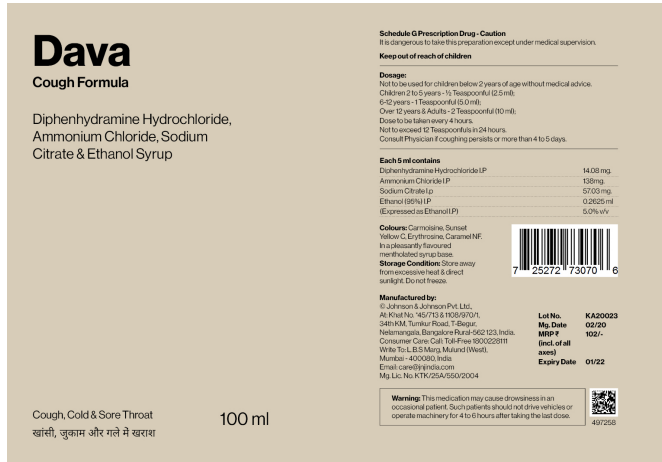
2. **Checking if the medicine has been taken :** No way of crosschecking in case of liquid medicine.

Features in structural design of secondary packaging

1. **Scratch reminder card :** The proposed packaging box design has a scratch/mark reminder card feature which offers an integrated solution to plan and track the intake, control if the intake took place, or show if and when the medication should be taken next.

2. **Increasing patient's adherence :** Additional panels added to a folding box offer the calendars or instructions and therefore, support patient's adherence in combination with the artwork.

The graphical design



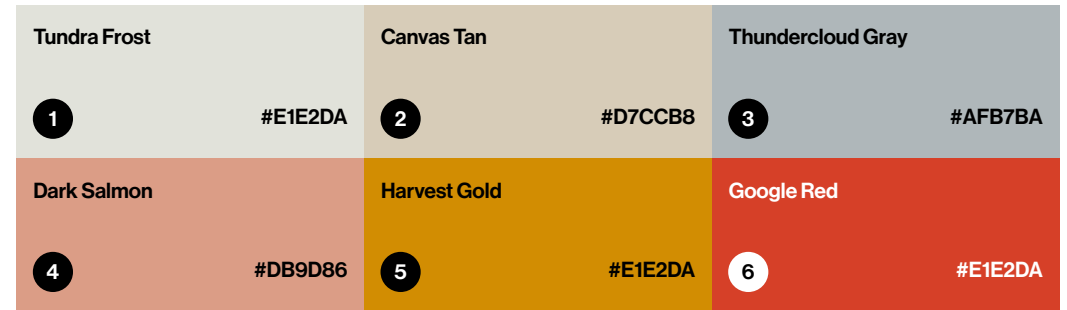
This label uses a color theme with a primary color, a primary variant, and a secondary color.

Color System

Balance of colors



Primary Variants



For Text



Type System

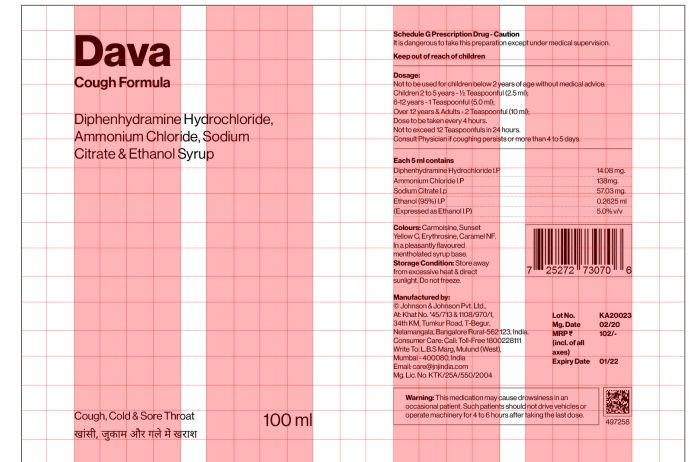
Aa1

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

Roboto Mono Regular

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

Roboto Mono Bold



The grid system adapts to accommodate different layouts with a consistent 5mm gap and 4 columns.

High legibility in Roboto Mono

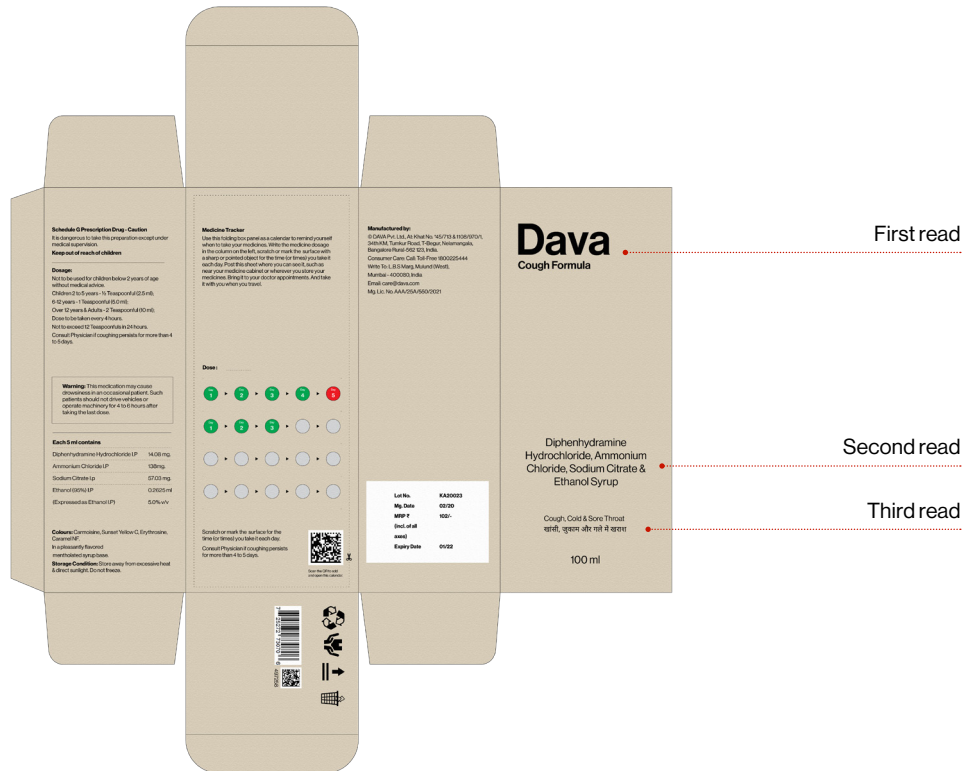
B8 Ili1 o00
a123456789

Traditional san serif fonts used in packaging

B8 Ili1 o00
a 123456789

The secondary packaging

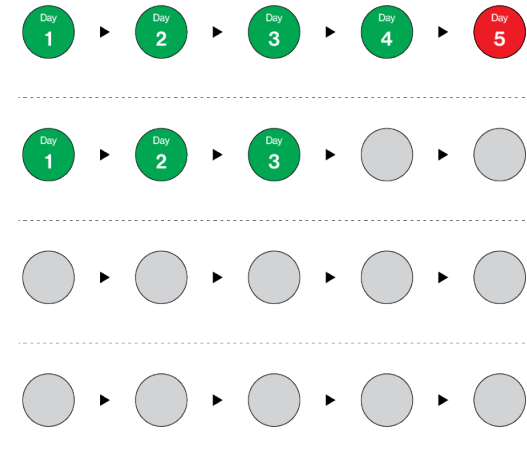
Medicine Tracker



Use this box panel as a calendar to remind yourself when to take your medicines. Write the medicine dosage in the column on the left. Scratch or mark the surface with a sharp or pointed object for the time (or times) you take it each day.

Cut it out and post this sheet where you can see it, such as near your medicine cabinet or wherever you store your medicines. Bring it to your doctor appointments. And take it with you when you travel.

Dose: _____

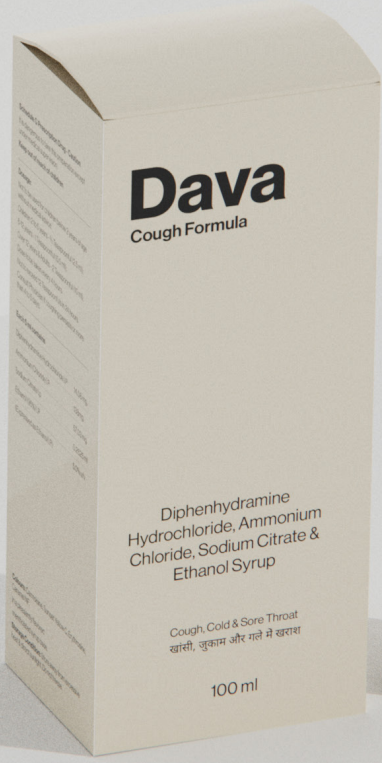


Scratch or mark the surface for the time (or times) you take it each day.

Consult Physician if coughing persists for more than 4 to 5 days.



Scan the QR to add and open this calendar.



Dava
Cough Formula

Diphenhydramine
Hydrochloride, Ammonium
Chloride, Sodium Citrate &
Ethanol Syrup

Cough, Cold & Sore Throat
खांसी, जुकाम और गले में खरस

100 ml



Dava
Cough Formula

Diphenhydramine Hydrochloride,
Ammonium Chloride, Sodium
Citrate & Ethanol Syrup

Cough, Cold & Sore Throat
खांसी, जुकाम और गले में खरस

100 ml



Hello, I am **Sumeet Singh**
an industrial design learner.

+91 9304258767

sumeet.singh@mitid.edu.in

www.behance.net/singhsumeet

www.linkedin.com/in/sumeet-singh-design

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