

**ME-NET
Stakeholder
Engagement
Board Meeting
#2**

November, 2024

ME – NET

- Welcome & introduction for any new members
- Updates on progress following *your input!*
- Self-reporting & visual self-assessment
- Your feedback & evaluation
- Future meetings & next steps.

(remember to start recording)

Agenda for today

Introductions

- Is this your first time with us?
- Your name
- Institution/community you represent/your expert lived experience area
- What comes to mind when you think 'methane'?



Positionality matters.

We asked you to fill out a short survey about you. Why?

Today we are co-developing some design options for self-reporting respiratory and mental health outcomes.

We would like you to consider your personal lived experience and what your perspective can bring to this exercise e.g., my experience of my mental health gives me a perspective that is unique to me!



About you.

If you haven't had a chance to complete the brief survey that was circulated in the reminder emails, you have time to do so now while we are getting started 😊

About you &
your lived experience

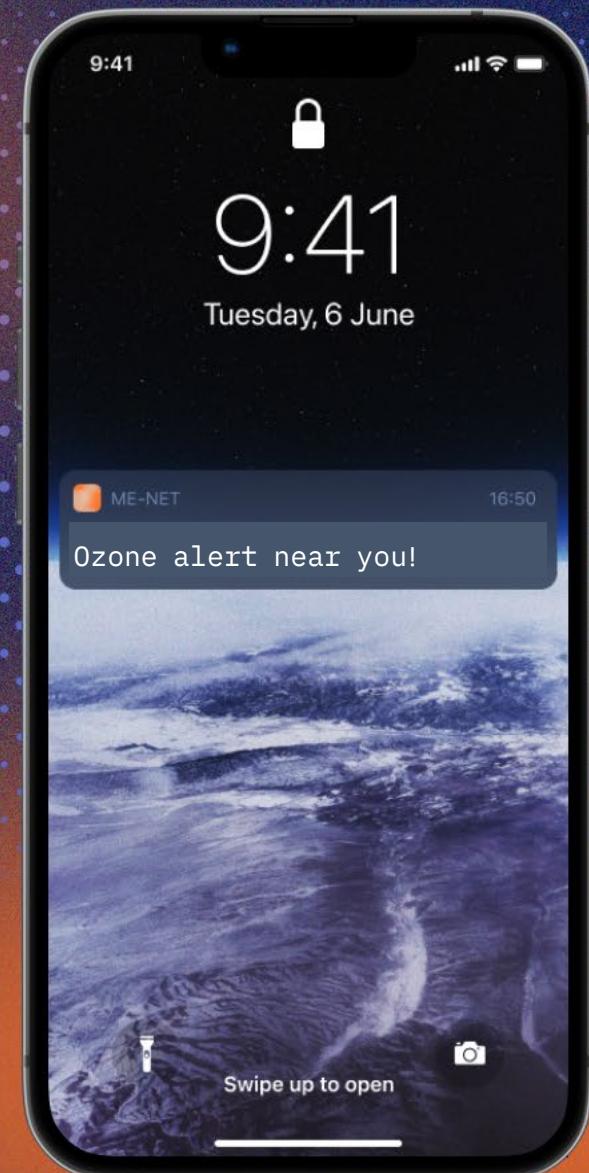


<https://forms.office.com/e/DpG7H7rsRb>

Methane Early Warning Network

Mobilising citizen science for global
social and ecological justice

ME – NET



My Profile & Alert Me

Main features (refresher)

1. Register a user profile including health conditions, demographic characteristics;
2. Set alerts (opt in for push-functions) for ozone in your area to receive recommendations for health protection;
3. Receive prompts to self-report daily respiratory & mental health outcomes health outcomes, including text/visual scales (e.g., emotion wheels);
4. Advanced option for setting bespoke thresholds for alerts (e.g., if particularly susceptible to asthma attacks might lower threshold for health protection recommendations).

Health profile

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Your details

User Name

UserName027

Age

24

Sex

Female

Region

Tamale

Your health conditions

Existing Health Conditions

Asthma

Ectyma

Existing Mental Health Conditions

Insomnia

Add another health condition

Health condition

Asthma

✓ Ectyma

Chronic obstructive pulmonary disease

Pulmonary fibrosis

Add health condition

Report your symptoms

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Report Details

Report Type

Respiratory Health

1. Please rate your symptoms on a scale of 1-7 where 1 means 'not at all' and 7 means 'very severe symptoms':

A. Shortness of breath or wheezing (1-7)

1 2 3 4 5 6 7

B. Coughing (1-7)

1 2 3 4 5 6 7

C. Chest tightness during the day (1-7)

1 2 3 4 5 6 7

2. How often have you used a rescue/quick relief inhaler in response to shortness of breath, wheezing, coughing and/or chest tightness?

Not at all

Once or twice

More than once or twice

3. Please consider how limited your daily activities have been as a result of shortness of breath, wheezing, coughing and/or chest tightness. Rate your experience on a scale of 1-7 where 1 means 'not at all' and 7 means 'severely limited':

1 2 3 4 5 6 7

Submit Symptoms

Your suggestions.

In our first meeting we asked you to identify 'unintended negative consequences' and to make suggestions that could enhance our ME-NET platform. You said:

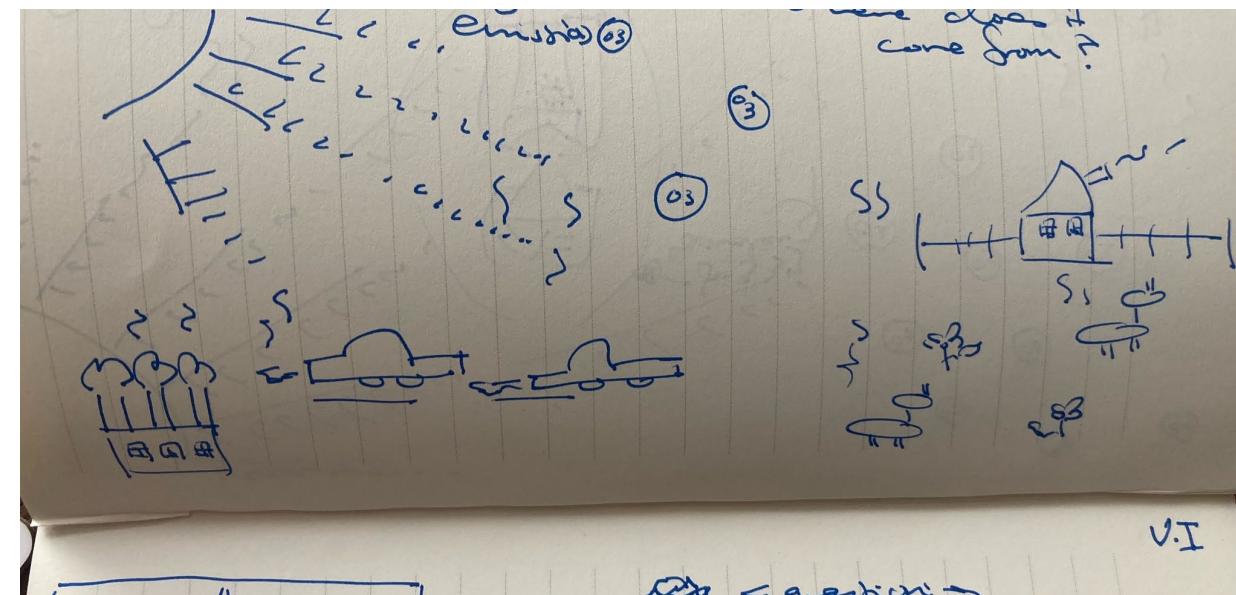
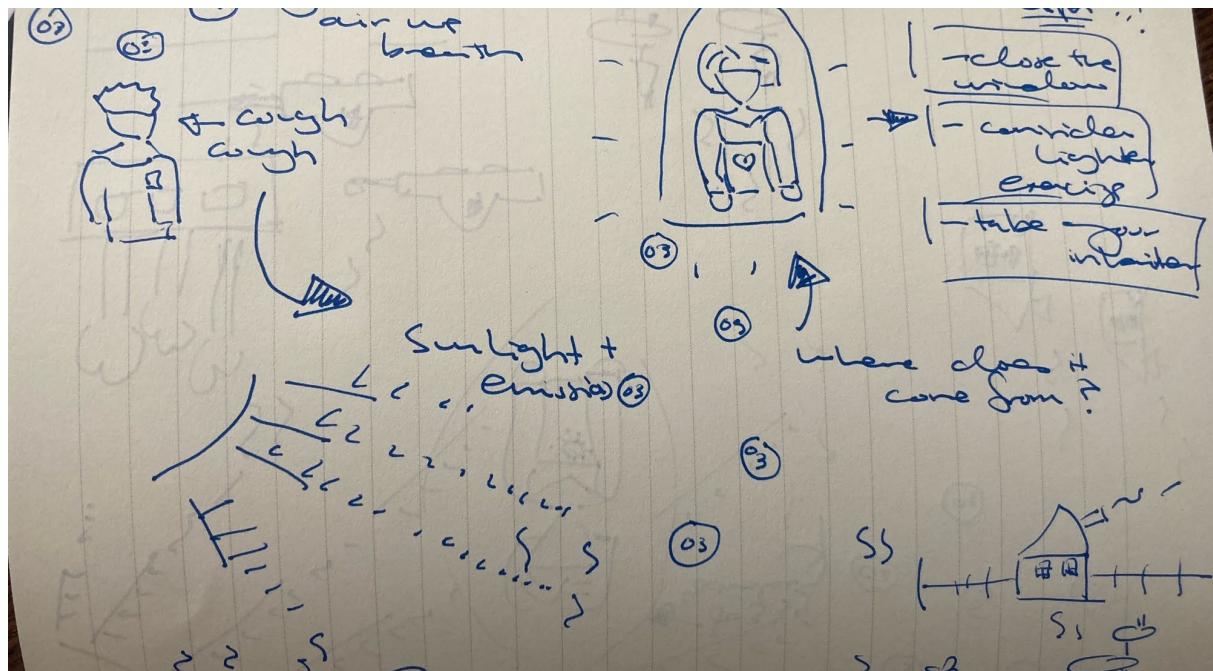
'A picture tells a thousand words'

- Educational model: start with simple picture-based image with touch-animation guiding user attention to links between health, sources of pollutants & environmental/meteorological condition -> fed this back to CK;
- Outcome: CK will adopt an 'agile' approach, users are guided through a simple module with options for 'find out more' boxes with facts, and additional links to 'find out even more' - 3 tiered!
- Self-reporting health & wellbeing: give users the option to self-report using visual/picture symbols in addition to traditional quantitative/numeric reporting;
- Outcome: we will give users the option of both numeric & picture-based reporting, but we need your help to co-design and trial the visual material!

CO-DESIGN FOLLOWING YOUR FEEDBACK

There is...a lot

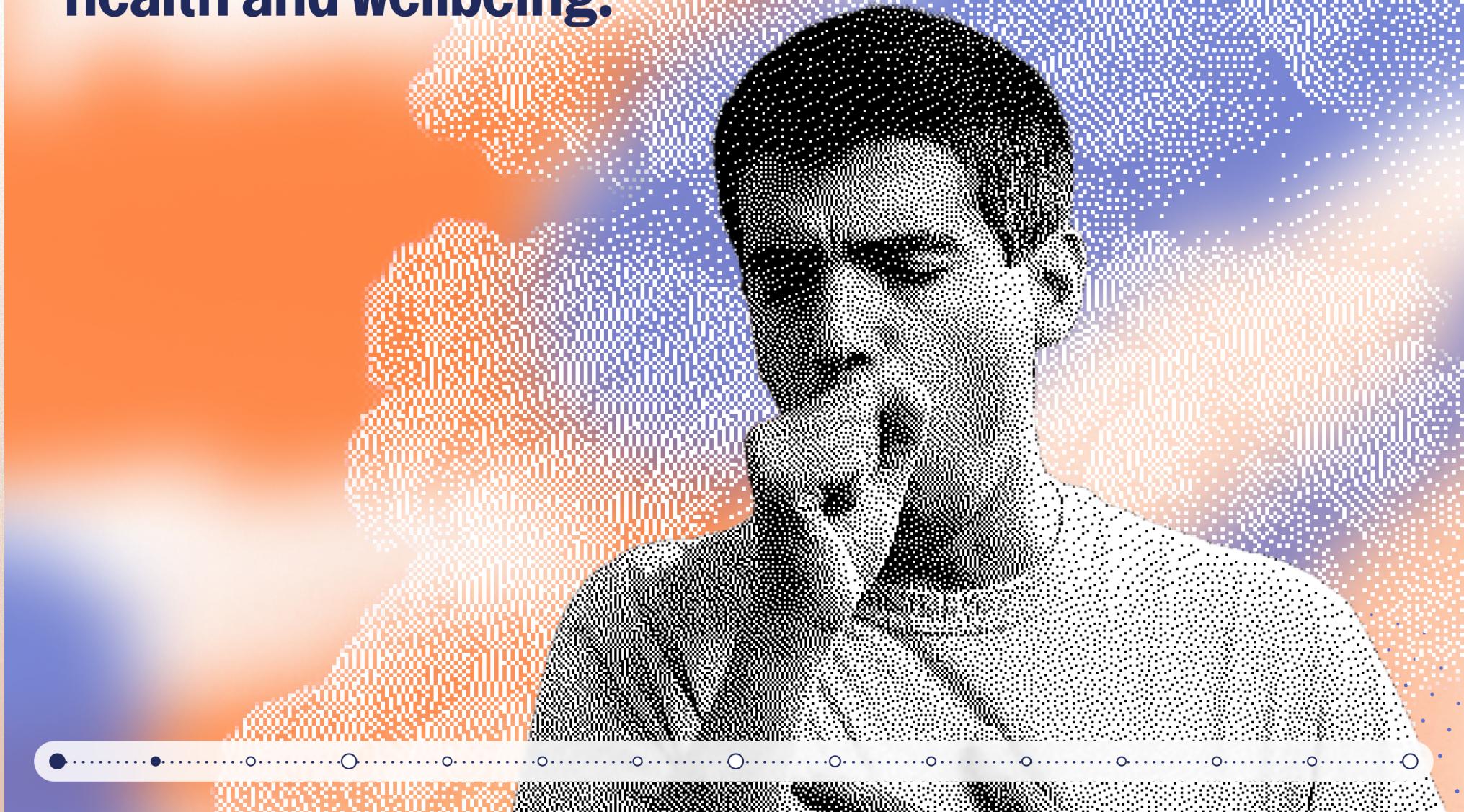
I will send a follow-up email to capture your feedback



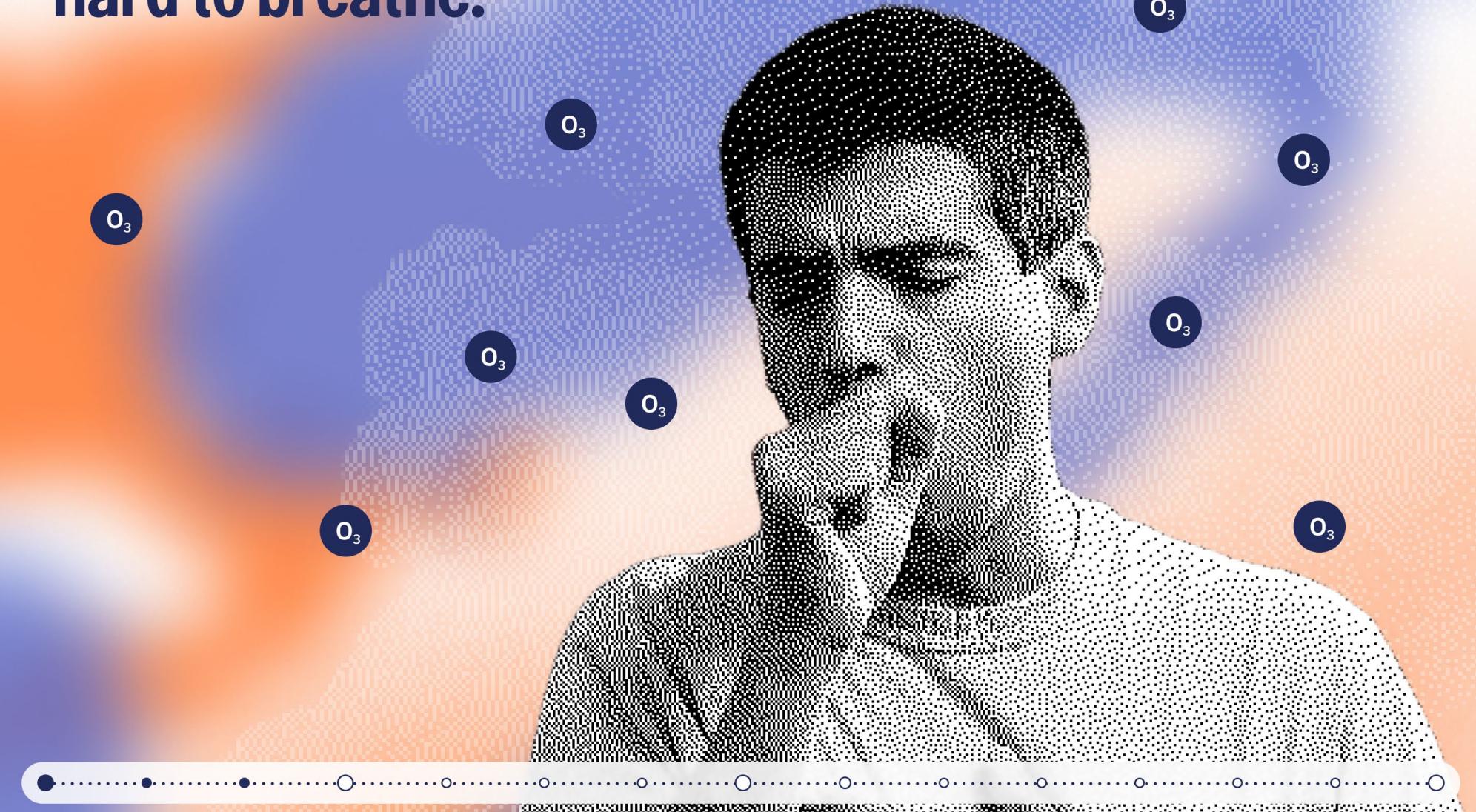


EDUCATIONAL MODULE #1

Air pollution can impact your health and wellbeing.



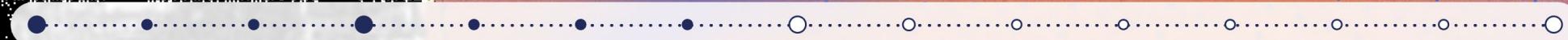
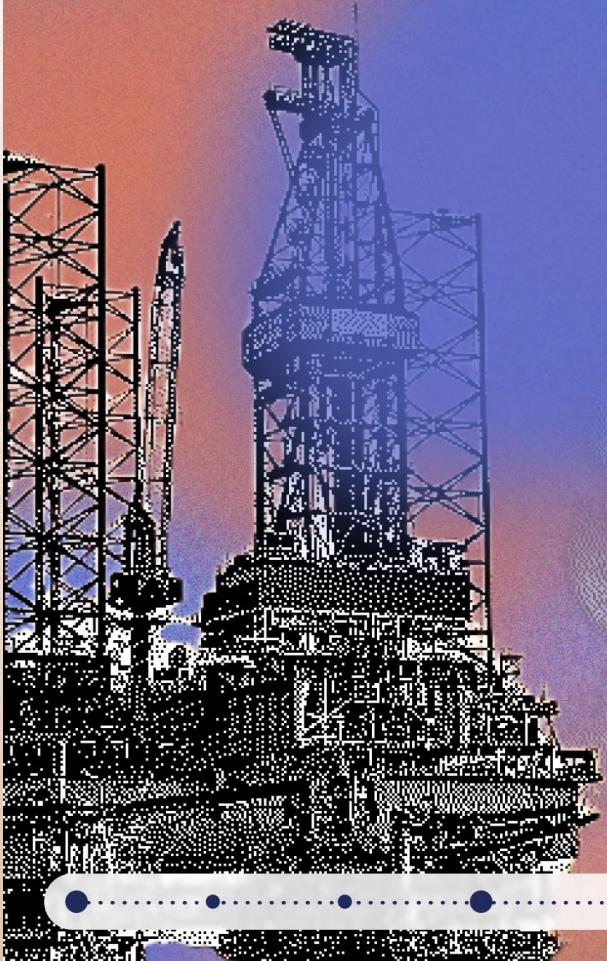
Ozone (O_3) in the air can make it hard to breathe.



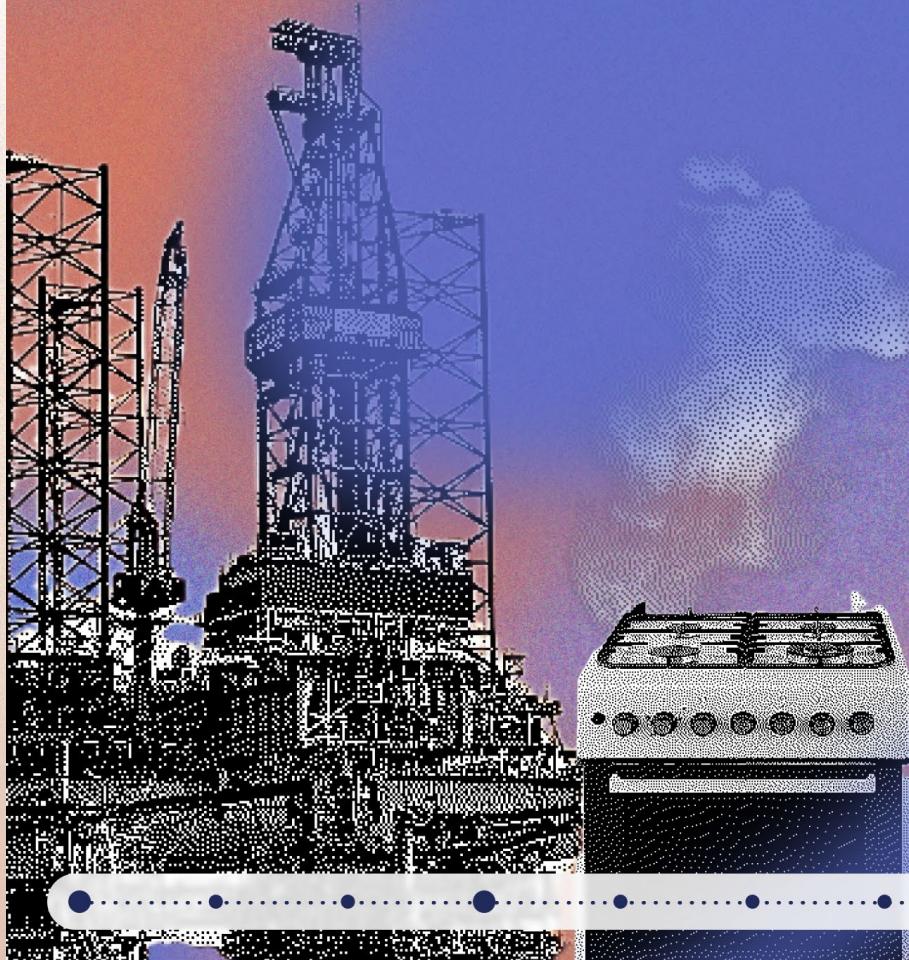
**Methane is an important emission
that contributes to the formation of
ozone in the air we breathe.**



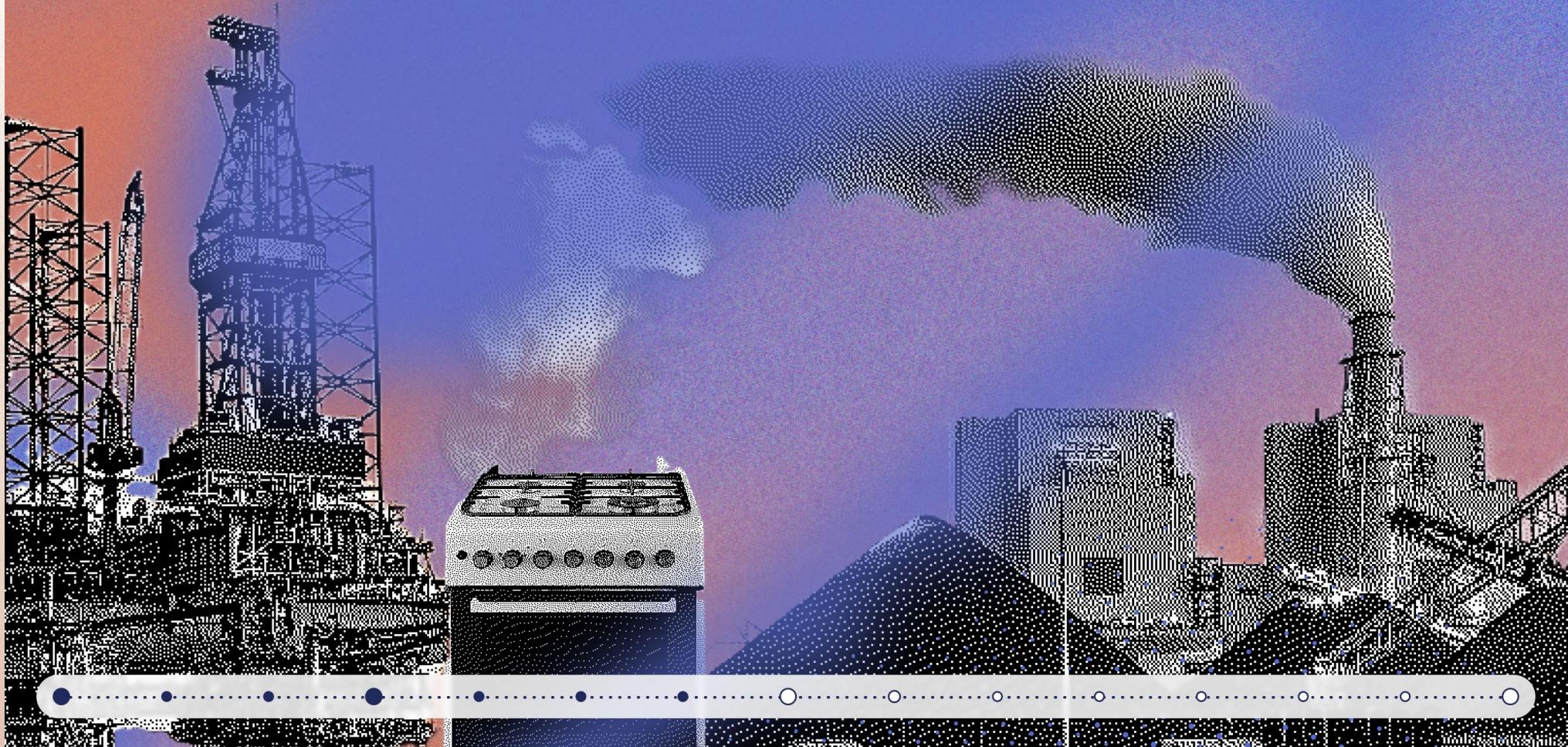
Methane in the air comes from oil production, indoor cookers, waste processing and cows.



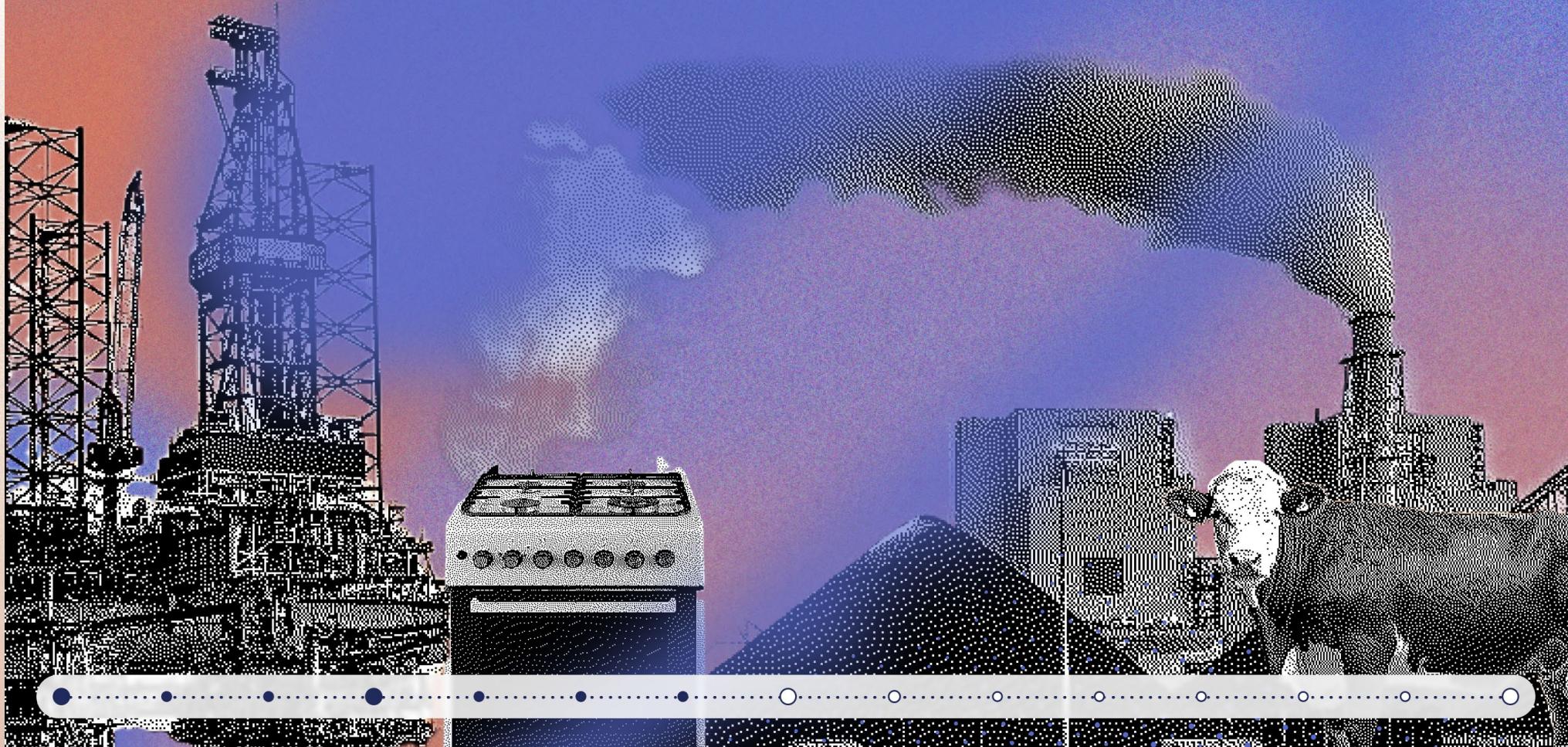
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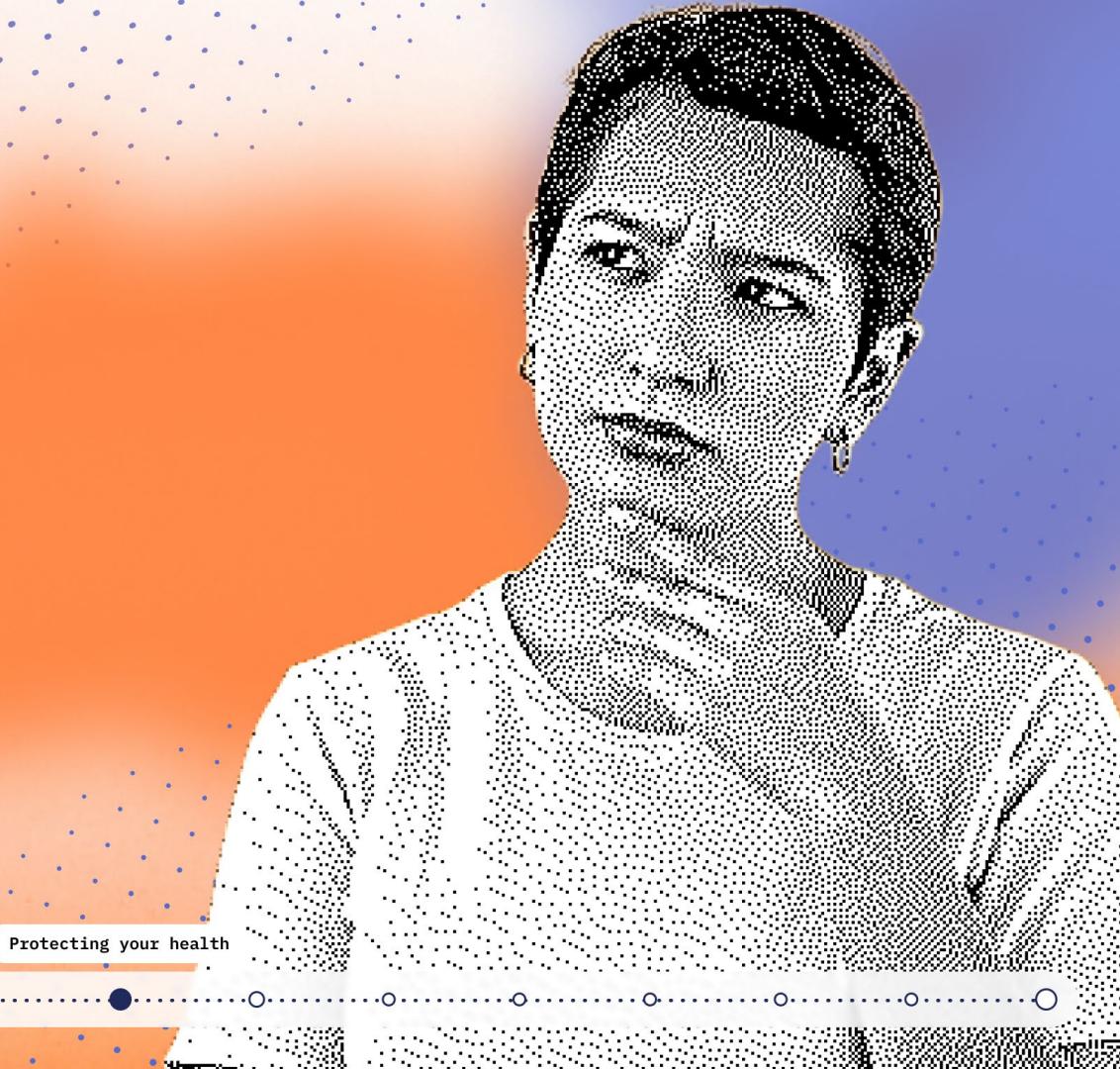
Methane in the air comes from oil production, indoor cookers, waste processing and cows.



Methane in the air comes from oil production, indoor cookers, waste processing and cows.



How can I protect my health?



Protecting your health



Close the window

**Consider lighter exercise
today**

Exercise in the morning
rather than the afternoon

Use your preventative
inhaler today

Pack your blue inhaler if
you're going out





EDUCATIONAL MODULE #2

ME-NET

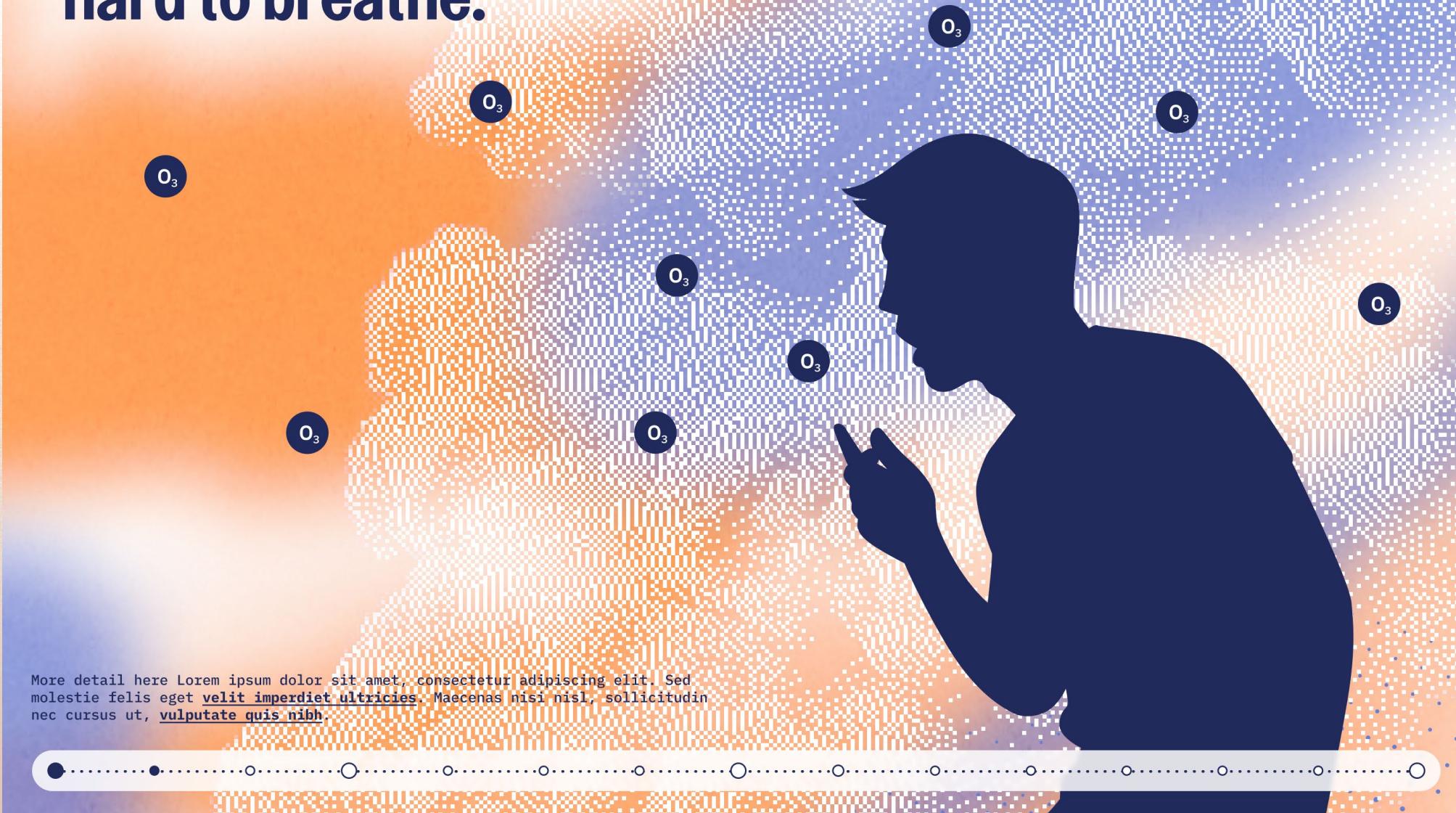
Air pollution can impact your health and wellbeing.



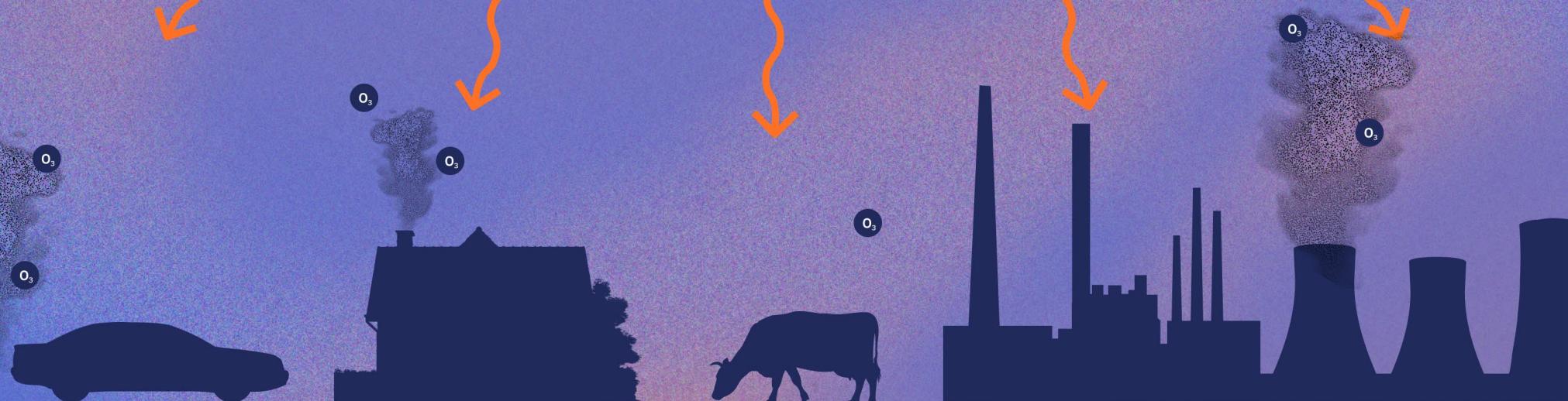
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Ozone (O_3) in the air can make it hard to breathe.



Ozone is produced when sunlight mixes with emissions from factories, cars, houses, and agriculture.

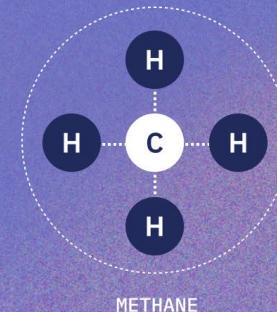


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Ozone emissions

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Methane is an important emission that contributes to the formation of ozone in the air we breathe.

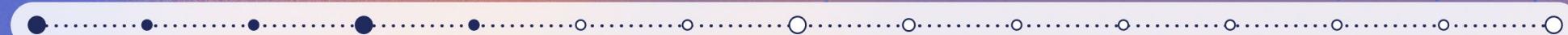


METHANE

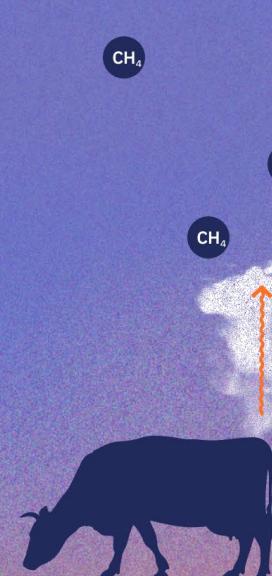
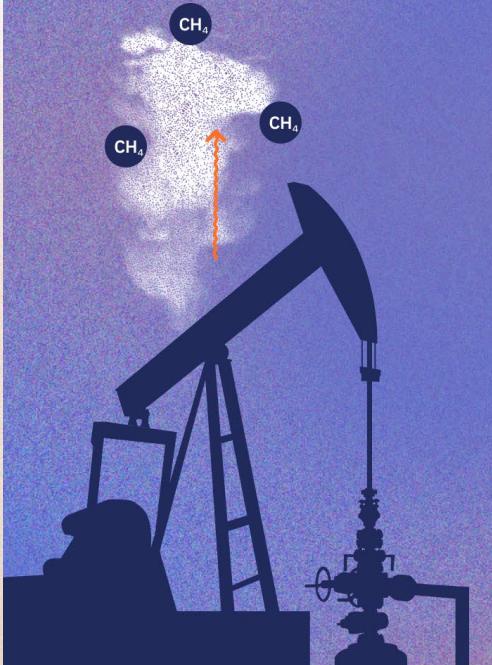
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[Methane emissions](#)

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ME-NET

How can I protect my health?



Protecting your health



ME-NET

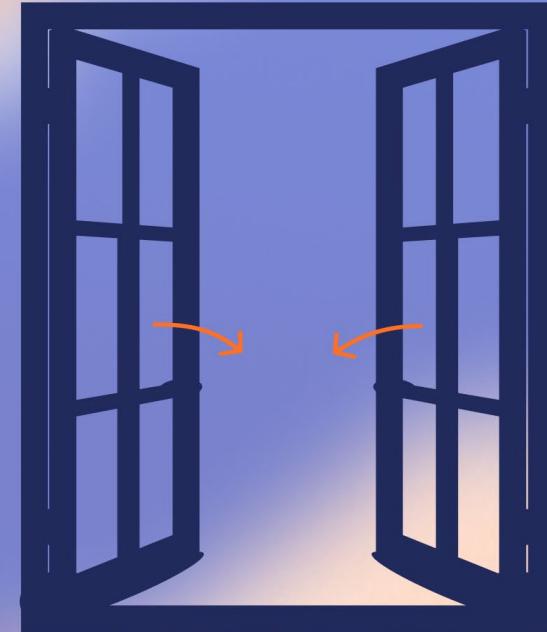
Close the window

Consider lighter exercise today

Exercise in the morning rather than the afternoon

Use your preventative inhaler today

Pack your blue inhaler if you're going out



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MAP DEVELOPMENT

Methane

☰ Menu

Temperature

Ozone

Health Outcomes

Methane

kg/hr

1935+
1720
1505
1290
1075
860
645
430
215
0

Prestea

Kumasi

Berekum

Sept 24



2017 | 2018 2019 2020 2021 2022 2023 2024



Select Year Range

Show data from between these years.

September 2019 ▾



November 2022 ▾

Methane Emissions

Show emissions within this range.



645 kg/hr

↔ 1505 kg/hr

Advanced



✓ Apply filters

Sunyani

Kumasi

Abofour

High Health Risk

Methane ⓘ

1311 kg/hr

Temperature ⓘ

41 °C

Ozone ⓘ

180 DU

Health Profile ⓘ

0.8 Vulnerability

Rate per population of acute/chronic respiratory emergencies, acute/chronic mental health emergencies.

Learn more about how we use data [here](#).

My suggestions:
relative risk OR
'Health Profile'
with rate per
population of
health conditions?

- Terminology
- Clarity
- Accessibility
of information



Thoughts/comments/concerns?

VISUAL SELF-ASSESSMENT

Visual self-assessment

VISUAL ANALOGUE SCALES

- Used to measure experiences that are typically difficult to measure conventionally e.g., pain;
- Involve a 100mm horizontal continuum from 'none' to an extreme state;
- Tend to be most reliable for measuring change in an individual rather than comparing between individuals.

SOME USEFUL RESOURCES:

Begum, M.R. and Hossain, M.A., 2019. Validity and reliability of visual analogue scale (VAS) for pain measurement. *Journal of Medical Case Reports and Reviews*, 2(11).

Crichton, N., 2001. Visual analogue scale (VAS). *J Clin Nurs*, 10(5), pp.706-6.

Sousa-Pinto, B., Eklund, P., Pfaar, O., Klimek, L., Zuberbier, T., Czarlewski, W., Bédard, A., Bindslev-Jensen, C., Bedbrook, A., Bosnic-Anticevich, S. and Brussino, L., 2021. Validity, reliability, and responsiveness of daily monitoring visual analog scales in MASK-air®. *Clinical and Translational Allergy*, 11(7), p.e12062.

CO-DESIGN

- We will present some content, including variations on validated measures, and some novel measures;
- Give you the opportunity to 'vote' on options & give more detailed feedback;
- This process will inform the visual self-assessment tools embedded in the ME-NET platform!

Commonly used for pain & wellbeing

Scales exist for happiness & sadness

Anxiety, confusion, boredom & excitement

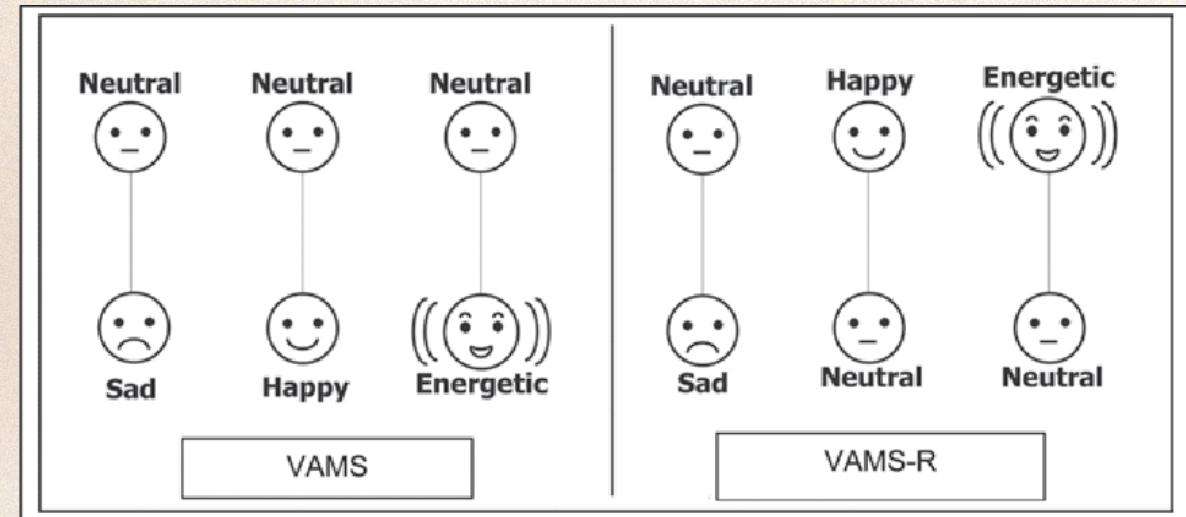
Some validated picture-based scales for symptoms of psychosis

No validated picture-based scales for respiratory symptoms

- Both accepted approaches, but what do we think?
- Raise hands for vertical;
- Raise hands for horizontal;
- Why?

- Raise a hand if you think these 'widgets' are easy to understand;
- What might a scale like this look like for symptoms of psychosis?
- What about respiratory symptoms?

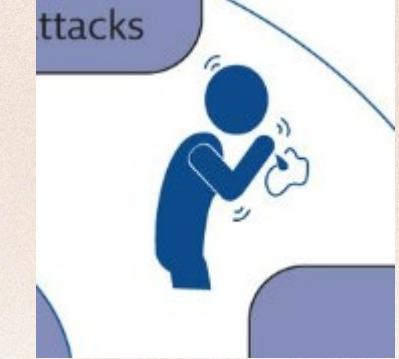
Visual analogue scales



Respiratory symptoms

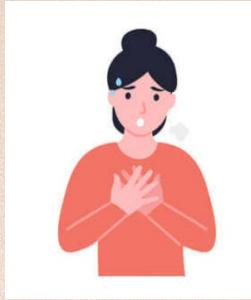
Key symptoms:

1. Shortness of breath
2. Coughing
3. Chest tightness
4. Fatigue



Respiratory Widgets





OPTIONS

- Line scale from 'none' to 'lots', OR an image with an option to select 'yes' or 'no' for the day?
- More meaningful to measure an 'amount' of 'coughing' or to capture yes/no?
- We might work with a widget company to develop some of these so something to think about...

Respiratory Widgets

Mental health symptoms

Key symptoms:

1. Anxiety
2. Depression
3. No affect
4. Intrusive thoughts/sounds
5. Paranoia
6. Hearing/seeing things others can't
7. Energy levels
8. What else?

Mental Health Widgets

OPTIONS

- Adapting existing resources for the ME-NET platform;
- Developing our own widgets (probably not budget feasible right now);
- Maybe we can trial how existing widgets are received in the application for self-reporting?



Mental Health Pack

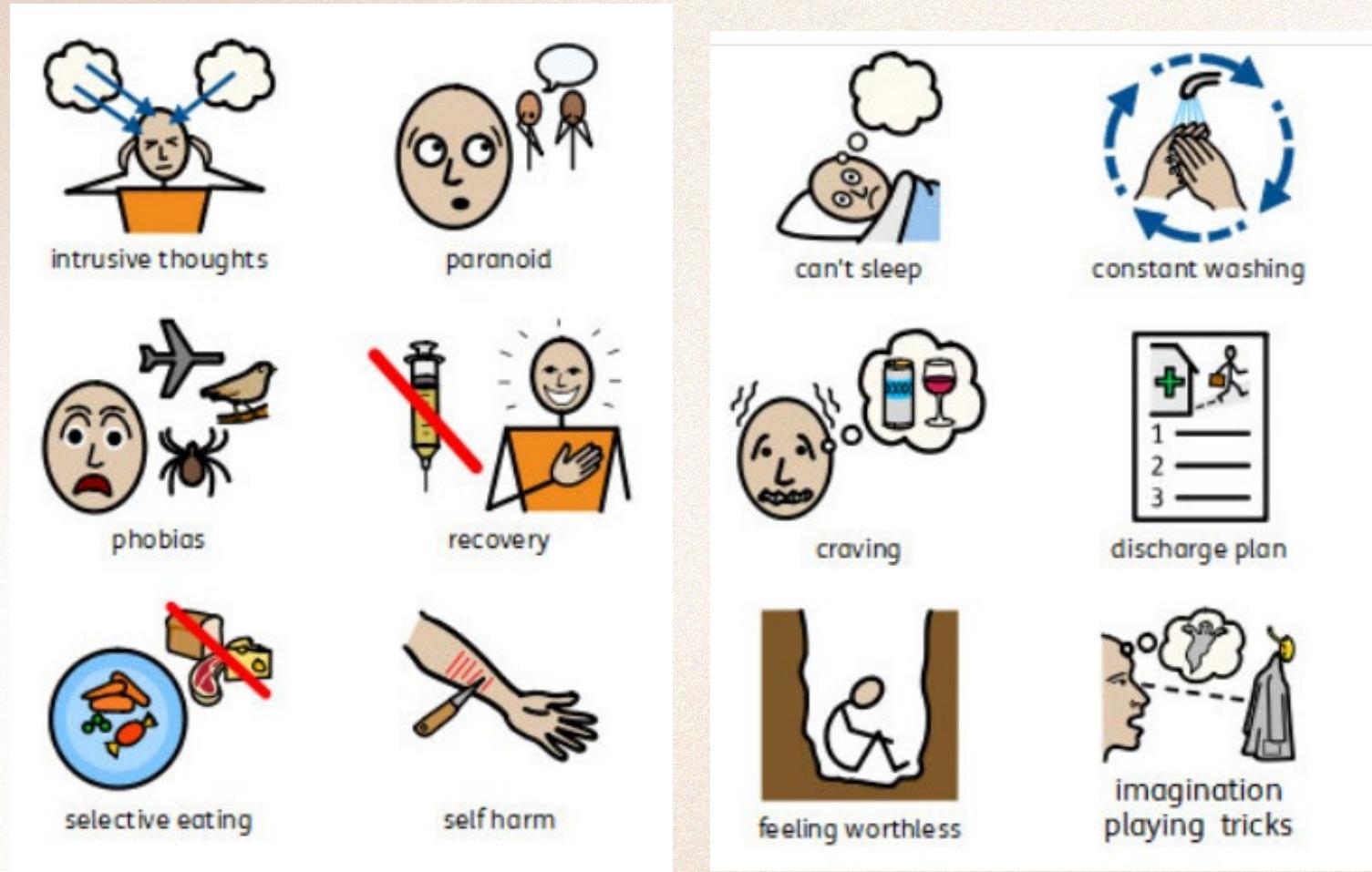
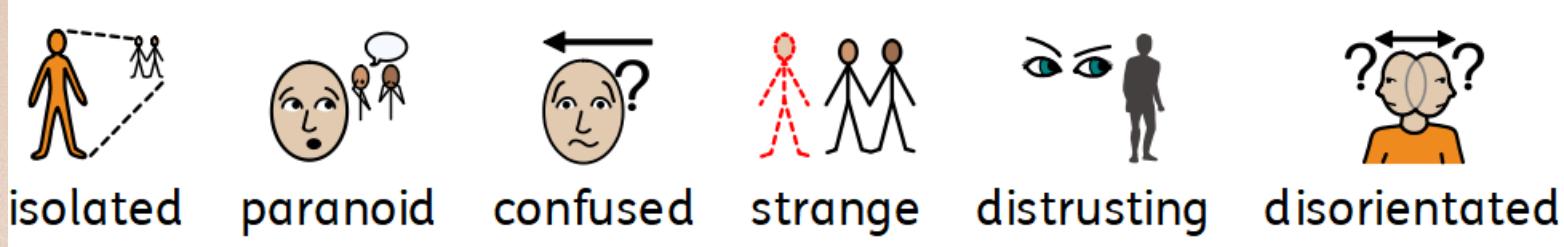
Symbol communication tool for psychiatric evaluation and explaining patient rights

This pack is designed to help those carrying out mental health assessments, either in psychiatric or physical health care settings.

Think about your lived experience & the ppl in your life:

- Are these widgets clear to you?
- Do you think they would be clear to people you know?
- Potential negative consequences?

Mental Health Widgets



CONTENT DEVELOPMENT

- I will send a follow-up survey & link to slides for those who would like to input further

POSITIONALITY SURVEY

<https://forms.office.com/e/DpG7H7rsRb>

WIDGET SURVEY

- For those who are interested in feeding into the design and development of respiratory/mental health widgets, I will send a follow-up survey to capture your perspectives on specific items and approaches - this is entirely optional!

MEETING TRANSCRIPTION

- All recorded meetings will be transcribed;
- Transcriptions will be uploaded to Microsoft Teams sites
- Opportunity to feedback.

Next steps

FUTURE MEETINGS

- Similar format, feed-back and co-develop content for the application following the themes below;
- Time-line for future meetings: e.g., January/Feb, March/April, May/June in person(?)

FUTURE THEMES

Graphing self-reported data; 'alert me'

Mapping observational data; 'explore and learn'

Prototyping functionality of the alerts system/app.

FINAL COMMENTS, QUESTIONS, CONCERNS?

**<Multi-hazards-to-health outcome
working group invites!>**

Thanks for
attending & see
you next time

November, 2024