2023 ANSA Conference

“REEF-CONNECTIONS”

Rydges Esplanade & Green Island
Cairns Queensland

August 10th – 12th

Day One Rydges Esplanade Thursday August 10th

Session One- FND

Chair: Holly Campbell

0830	Registration, Tea, Coffee
0900	Opening Statement Holly Campbell & Welcome Justin Stent, ANSA President
0930	Controversies in Epilepsy, Dr Ian Wilson- Consultant Neurologist CBH
1000	FND- Dr Kim Forrest Neurologist Consultant Neurologist CBH
1030	Morning Tea

Session Two- FND EEG & Seizures

Chair: Justin Stent

1100	In Worldview & why it matters; No more “frequent flyers” we explore the powerful impacts and expected long-term trajectory of care a mental health consumer can expect to receive once labelled in the system as a “frequent flyer”. Kristy Grieg
1130	Suggestive Seizure Manipulation- Survey Findings – Justin Stent
1200	Prospective validation of a mobile and wearable app to forecast seizure risk- Ewan Nurse - Zoom
1230	Overdose EEG- Susanne Timmins
1300	Lunch

Session Three and Four- Workshops- Next page

1400	Workshop rotation 1
1445	Afternoon tea & door prize draw
1515	Workshop rotation 2

Session Three Workshops 1400- 1445

Chair: Alyssa Tieppo

NCS Workshop Station 1 - RNS- Holly Campbell - Group 1	NCS workshop Station 2 - Uncommon NCS- Ruben Villa - Group 2
EEG Workshop Station 1 - 8 Channel EMG station 1- Alyssa Tieppo - Group 3	EEG/NCS Workshop Station 2 - Trade Delegates - Group 4
Interactive Station 1 - Video station - AANEM: Intro to NCS/EMG	Interactive Station 2 - Competition Station - 10-20 Eye Comp.

1445 Afternoon Tea

Session Four Workshops 1515- 1600

Chair: Stephanie Gill

NCS Workshop Station 1 - RNS Holly Campbell - Group 2	NCS workshop Station 2 - Uncommon NCS- Ruben Villa - Group 1
EEG Workshop Station 1 - 8 Channel EMG station 1- Alyssa Tieppo - Group 4	EEG/NCS Workshop Station 2 - Trade Delegates - Group 3
Interactive Station 1 - Video station - AANEM: Intro to NCS/EMG	Interactive Station 2 - Competition Station - 10-20 Comp.

Social Event: Welcome Drinks

OAK & VINE

Thursday 10th August 2023 1700-1900

Bought to you by: Sonoray Pty Ltd

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Day Two- Rydges Esplanade **Friday August 11th**

Session Five- EEG Alternates

Chair: Queenie Desalia

0815	Registration, Tea, Coffee
0830	The National Safety and Quality Health Service (NSQHS) Standards - Jennifer Stowell
0900	Utility of EEG in diagnosis, prognosis, and treatment of psychiatric disorders Michelle Aniftos
1000	Murray Valley Encephalitis – Stephanie Gill
1030	Morning Tea

Session Six- Paediatric & Sleep EEGs

Chair: Vicky Grant

1100	Sleep Myoclonus in infants: Dr Mohan Swaminathan Paediatrician
1130	Epilepsy Imitators- Jo Castle
1200	Network discovery in LGS – Dr John Archer
1230	The Science of Sleep- Zoe Klibbe
1300	Lunch

Session Seven and Eight Workshops- Next page

1400	Workshop rotation 1
1445	Afternoon tea & door prize draw
1515	Workshop rotation 2
1600	Tribute- Linda Welch – Optional Join us to celebrate the contributions of a long term member of ANSA, a significant professional contributor to the Neurophysiology profession & Queensland Health over her many years (>40) of her life in Neurophysiology.

Conference Dinner- 1830

Session Seven- Workshops 1400- 1445

Chair: Luke Slingsby

NCS Workshop Station 1 - RNS Dr Andrew McNabb - Group 3	NCS workshop Station 2 - Uncommon NCS- Ruben Villa - Group 4
EEG Workshop Station 1 - 8 Channel EMG station 1 - Group 1	EEG/NCS Workshop Station 2 - Trade Delegate - Group 2
Interactive Station 1 - Video station - AANEM: Intro to NCS/EMG	Interactive Station 2 - Competition Station - 10-20 Comp.

1445 Afternoon Tea

Session Eight Workshops 1515- 1600

Chair: Jessica McGinty

NCS Workshop Station 1 - RNS Dr Andrew McNabb - Group 4	NCS workshop Station 2 - Uncommon NCS- Ruben Villa - Group 3
EEG Workshop Station 1 - 8 Channel EMG station 1 - Group 2	EEG/NCS Workshop Station 2 - Trade Delegate - Group 1
Interactive Station 1 - Video station - AANEM: Intro to NCS/EMG	Interactive Station 2 - Competition Station - 10-20 Comp.

Social Event – Conference Dinner

RYDGES ESPLANADE

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Day Three- Green Island – Face to Face Only – Hawaiian Shirt Day
Saturday August 12th

Session Nine- "Environment"
Chair: Holly Campbell

0800	Meet at Reef Fleet Terminal
0830	Depart Terminal
0930	Arrive Green Island
0945	Clinical changes towards sustainability- Qhealth ABC video presentation
1000	Open Mic discussion: Departmental changes for sustainability
	Trade Delegates: Moves Towards Sustainability
1030	Morning Tea

Session Ten "Closure"
Chair: Stephanie Gill

1100	Wunyami tour x 1 guide (those not attending AGM) *needs to be booked in advance.
1100	AGM (financial members only)
1145	Closing Statement, Awards & Competition Winners
1200	Plated Lunch
1300	Glass Bottom Boat
*1430	Depart for Cairns
1530	Arrive in Cairns
*1630	Boat departure available and arrives in Cairns 1730- If you would like this OPTION please let us know.
	**please remember to book extra guests with Holly

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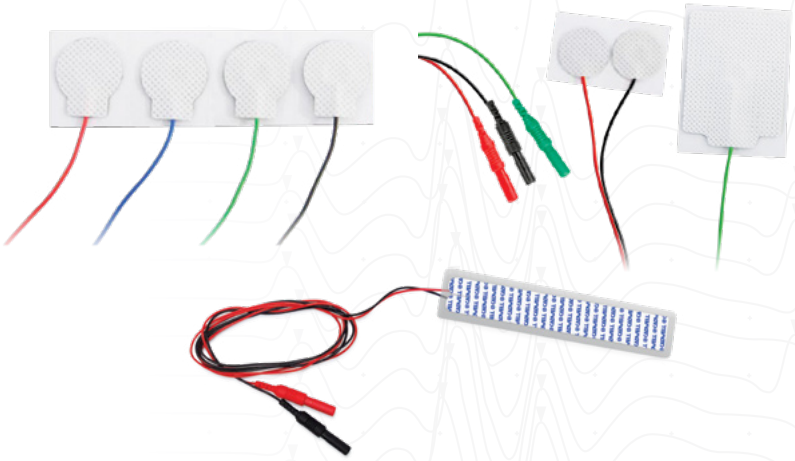

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Abstracts:

Susanne Timmins

The presentation looks at how Baclofen and Lithium can affect the EEG in patients who have taken overdoses of these drugs.
Two Case studies on how the EEG presents.
Firstly: Baclofen is prescribed for the treatment of muscle spasticity approved by the FDA (USA) approved for the management of reversible of spasticity. Baclofen was originally designed in 1969 to treat epilepsy. However, the results were not satisfactory. Baclofen was reintroduced in 1971 when it was found to treat muscle spasticity. Overdose on Baclofen tablets has reported vomiting, drowsiness, muscular hypotonia, accommodation disorder, coma respiratory depression and seizures. EEG performed on the patient was in burst suppression. Secondly: Lithium is a stabilizing medicine used to treat certain mental health illnesses. Short term side effects: stomach discomfort, mils nausea, diarrhea, vertigo or dizziness, muscle weakness and feeling dazed. The patient presented with overdose of lithium resulting in the patient having non-convulsive Status epilepticus vs severe encephalopathy with triphasic waves and epileptiform discharges.

Michelle Anifstos

In clinical practice, the most important general principle of organization in the central nervous system is that each CNS function (e.g., sensory perception, motor control, affect regulation, executive function) involves groups of neurons that are spatially distributed and synaptically, interconnected. Neuronal activity can be recorded and represented as EEG (electroencephalography) - a painless and non-invasive way of measuring and mapping the electrical activity of the brain.

Evidence is emerging that EEG phenotypes may be recognized as semi-stable states of neurophysiological function observable in common psychopathologies (Johnstone, Gunkelman, & Lunt, 2005; Kropotov, Pąchalska, & Mueller, 2014). Identification of disorder-specific brain traits may improve diagnosis of disease and may further contribute to predictions of treatment response, for example, to either medication and/or non-invasive interventions. QEEG findings may identify neurophysiological attributes of brain-based dysfunction that may be responsive to non-invasive forms of neuromodulation to improve function.

This brief presentation aims to demonstrate the clinical utility of EEG to inform:

- Diagnosis, a case study in neurocognitive decline
- Prognosis, pre and post psychostimulant treatment efficacy in ADHD
- Formulation and treatment of symptoms of neurodevelopmental disorder.

Michelle has over 30 years of education and training in Australian schools and Universities, and clinical practice in private health. She is the Owner/Director of a private mental health practice with three regional and remote offices in south-east, Queensland; and a part-time Clinical Educator for SQRH (a University Department of Rural Health). Michelle is an Accredited Clinical Physiologist given her training and experience in EEG. She has been a passionate learner, clinician, mentor and advocate for EEG-guided assessment and intervention since being introduced to applied neuroscience in 2004.

Michelle initiated a peer-supported training program to engage Australian practitioners in the pursuit of IQCB-accredited training and certification in QEEG Assessment. She is a Fellow and past President of the Applied Neuroscience Society of Australasia; and a Fellow and past Chair of the Biofeedback Certification International Alliance - Australia. Michelle has neurofeedback certification with the BCIA, QEEG certification with the IQCB, and has been endorsed as a mentor for those seeking Certification Neurofeedback and/or QEEG.

Jen Stowell,

Supervisor, Clinical Neurophysiology Scientists, Sir Charles Gairdner. The National Safety and Quality Health Service (NSQHS) Standards provide a nationally consistent statement of the level of care consumers can expect from health service organizations. If you work in public health, chances are you have been through an accreditation process. When accreditation roles around it is widely publicized within the health service and on a departmental level, we often panic to ensure we meet all requirements - just in case our department is the area that gets assessed on the day! Demonstrating an understanding of, and ability to apply the National Safety and Quality Health Service Standards is a big part of the accreditation process. In my talk I will breakdown the Standards to make them easier to understand and identify ways in which we can relate them to our work areas. Hopefully, we can workshop this together to share our experiences and ideas.

Workshops.

These workshops are interactive, hands on covering both elements of theory and practical. Each session will require volunteers in the group. Take the time to ask experts, have discussions share experiences, have a go, and see what the tests feel like from patients perspective.

Repetitive nerve stimulation workshop:

Anconeous
Trapezius
Nasalis

Uncommon Sensory NCS workshop

Medial & lateral plantar
Medial & lateral antebrachial

Uncommon Motor NCS workshop

Phrenic nerve
Trapezius

EEG machine for surface EMG workshop
(8 Channel EMG using EEG machine for aiding in diagnosis of MND

EEG workshops

- Advanced software features of Compumedics EEG systems
- New Features in ProFusion EEG 7\
- Advanced ProFusion EEG Features - Includes Montage Creation, Advanced Search, Editing, Surgical Montages etc.

NCS workshops;

Natus NCSEMG machine
Software features
Signal processing
Hardware specifics

Basics of NCS and Needle EMG - Part 1

Articulate the basic concepts underlying NCSs and how to approach NCSs; conduct and interpret NCSs in the upper and lower extremities and identify anomalous innervations; use specialized studies including RNS, cranial nerve studies, and blink reflex; apply needle EMG for the diagnosis of NMDs; recognize common pitfalls, explain technical factors and important safety considerations affecting the study.

- 10 minutes: Introduction

Mohammad K. Salajegheh, MD

- 30 minutes: Basics of Nerve Conduction and Approach to Study

Mohammad K. Salajegheh, MD

- 45 minutes: Upper and Lower Extremity NCS

Kelly G. Gwathmey, MD

Basics of NCS and Needle EMG - Part 2

Articulate the basic concepts underlying nerve conduction and approach to the study; conduct and interpret NCSs in the upper and lower extremities and identify anomalous innervations; use specialized studies including RNS, cranial nerve studies, and blink reflex; apply needle EMG for the diagnosis of NMDs; recognize common pitfalls, explain technical factors, and important safety considerations affecting the study.

- 50 Minutes: Specialized Studies and Needle EMG Basics

Aaron Izenberg, MD

- 45 Minutes Study Pitfalls and Trouble Shooting

Joseph M. Choi, MD

Posters:

Ambulatory EEG, an Invaluable Adjunct to Evaluation of Spells Concerning for Seizure: A Case Report

While an Epilepsy Monitoring Unit (EMU) evaluation is the gold standard for accurate diagnosis of spells concerning for seizures, an EMU admission is often not feasible for a myriad of reasons. Bed availability, cost, distance, family and work responsibilities which prevent prolonged absence from home are a few reasons EMU evaluations are either not pursued or are limited.

Lance Adams syndrome

Lance Adams syndrome also known as chronic post-hypoxic myoclonus is a persistent action myoclonus in awake and alert patients that may occur days or weeks after cardiopulmonary resuscitation and subsequent survival of a cardiac arrest. (Adams 1963)

Utility of IONM in Hypoglossal Nerve Stimulator Procedures

Hypoglossal nerve stimulator (HNS) placement effectively treats obstructive sleep apnea (OSA) by selectively stimulating the muscles that protrude and retract the tongue. IONM helps to identify and differentiate branches of the hypoglossal nerve to guide optimal Surgical placement. The procedure's success relies on obtaining a robust EMG response from the tongue's stiffening and protrusion muscles, without activation of the retraction muscles during stimulation. The following evidence-based recommendations represent best practices for use of IONM during the surgical placement of an HNS.

Myotomes Matter: Why "tcMEPs present x 4" is Not Always Sufficient in Spine Surgery

Over many years, the IONM community has become accustomed to using tcMEPs for spinal cord monitoring, and the closing statement "tcMEPs present x 4" has been a reassuring one. More recently, we are understanding the effectiveness and importance of extending tcMEP monitoring to include individual nerve root protection (commonly C5 and L4). In this context, concluding a case with "tcMEPs present x 4" is not always sufficient, and may come with an increased risk of false negatives and unpredicted postoperative deficits. Here we present two cases in which "tcMEPs present x 4" at closing would have failed to predict the significant postoperative neurological deficits that followed.

NMDA encephalitis- A Brain on Fire.

Anti-N-methyl D-aspartate (NMDA) receptor encephalitis is an autoimmune disorder caused by antibodies that mediate immunoreactivity against the NMDA receptor 1 (NR1) subunit of the NMDA receptor that underpins mood and cognition (1). Patients present with variable symptoms which can include psychosis, seizures, or cognitive decline that in turn could cause a delay in appropriate diagnosis (2,3). It was first described in 2007 by Dalmau and colleagues in which psychiatric and neurologic symptoms were found in women with ovarian teratomas, however the condition was later confirmed.

Application of Quality Concepts and Framework in IONM

In observing roughly 2,000 surgical neurophysiologists over the course of 3 years, our institution recognized great variability across individuals and organizations in areas such as IONM plan, technical technique, communication/teamwork, and data reliability. Because variability is inversely proportional to quality (higher variability = lower quality), our institution set out to understand quality terminology, identify quality benefits and understand quality implementation for IONM.

Reducing Stimulus Frequency as Part of the Algorithm for Improving the Reliability of "Poor" LE SSEP Baselines

We created a protocol for optimizing LE SSEP in situations where data is deemed poor/unreliable at baseline that combines other validated troubleshooting methods with utilization of a lower stimulus rate than is typically used in our SSEP protocols. This series includes 18 patients identified as having poor/unreliable LE SSEPs. Significant improvements in LE SSEP reliability were noted in 15 of 18 patients. Of the 15, 2 patients had data that only became reliable after reducing the stimulus rate. 3 patients showed no improvement in reliability or had no obtainable LE SSEP responses from either the Tibial Nerve(PTN) or Peroneal Nerve(PN). Further investigation is needed to determine specific patient conditions or pathologies that can be effectively addressed by including the alteration of the SSEP stimulus rate as part of the troubleshooting algorithm for improving reliability.

Comprehensive Analysis of the Utilization of Trapezius in IONM.

To explore the role of the trapezius muscle in intraoperative neuromonitoring (IONM) due to the variation and complexity of the spinal accessory nerve (SAN) and brachial plexus motor and sensory contribution.

Tools and Strategies to Increase Teamwork Culture.

Teamwork (or lack of) among the IONM Team members can impact the efficacy of IONM. In healthcare, a teamwork culture encourages collaboration and cooperation to improve patient outcomes, decrease medical errors and improve efficiency. Education and training resources for IONM teamwork culture and organizational policies and procedures are not widely available. Our institution has the unique vantage point by working with contracted IONM Surgical Neurophysiologist (SNP) groups across the county. Through a series of case reviews and quality control methods, our institution determined poor communication and lack of teamwork to be the number one cause of quality concerns. With these results, we looked to apply evidence-based strategies to enhance IONM team efficacy

Utility of TcMEPs from the EAS in the Surgical Correction of Pediatric Spinal Deformity Procedures

IONM has long been widely accepted as the standard of care in the surgical correction of pediatric spinal deformity. SSEPs reduce the risk of spinal cord injury (SCI); however, they only provide indirect information regarding the integrity of the motor pathway. Adding TcMEPs to the IONM paradigm can reduce this risk by directly monitoring the corticospinal tracts. Therefore, a multimodality approach is advised to minimize the risk of irreversible spinal cord and other neurological injuries.The IONM team often selects muscles for TcMEPs based on whether they are monitoring motor pathways and/or nerve root function. TcMEPs in spinal deformity procedures are typically used to determine the functional integrity of the anterior cord. Over the last several years, our institution has seen an increase in the inclusion of the external anal sphincter (EAS) muscle in TcMEP montages. Presumably, this is to provide the surgeon with information regarding sacral sparing. Sacral sparing can determine if an SCI is complete or incomplete. A complete SCI indicates paralysis below the location of the injury. In contrast, patients with an incomplete SCI can still retain function below the injury site. This study aimed to determine if adding EAS to the TcMEP montage provides utility to the surgeon in spinal deformity correction procedures.

COMPETITION & PRIZES

Competitions:

- ✓ **Best Poster Competition-** As voted by all attendees
- ✓ **"The Trained Eye"**- the 10-20 Competition.
- ✓ **And much more** – attend to find out!
- ✓ Door prizes

Prizes:

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Delegates

FIRST NAME	LAST NAME	STATE
Mehmet	AKPINAR	NSW
Breanna	BALCHIN	QLD
Kate	BURGES	WA
Holly	CAMPBELL	QLD
Johanne	CASTLE	QLD
Pauline	CHAMBERLAIN	WA
Penny (Peng)	CHEN	NSW
Terry Gillian	CLOETE (CHIRGWIN)	QLD
Rowena	COOKE	NZ
Anna	D'ARCY	NSW
Nericha	DE KOCK	QLD
Queenie	DESALIA	QLD
Michilla	DU PLESSIS	QLD
Mikaela	GEAR	QLD
Stephanie	GILL	WA
Vicky	GRANT	QLD
Alice	JEPHCOTT	QLD
Anita	JONES	NSW
Mary	LYNCH	NSW
Jessica	MCGINTY	NSW
Ranitha	NANDKUMAR	TAS
William	NAPIER	QLD
Karen	PRINCE	NSW
Nicola	RICHARDS	QLD
Job	ROBREDILLO	NSW
Ashley	SALTMARSH	QLD
Jasmine	SAMMUT	QLD
Gloria	SIMON	NZ
Luke	SLINGSBY	QLD
Justin	STENT	NSW
Jennifer	STOWELL	?
Alyssa	TIEPPO	QLD
Suzanne	TIMMINS	QLD
Ruben	VILLA	QLD
Joanne	WEX	QLD
Kim	WILMOT	TAS

SPEAKERS

MICHELLE	ANIFTOS
DR JOHN	ARCHER
KIMBERLY	FORREST
KRISTY	GREIG
ZOE	KLIBBE
EWAN	NURSE
DR IAN	WILSON
DR MOHAN	SWAMINATHAN

About Cairns ANSA Conference 2023.

This years conference we concentrated on “Reef-connection”, neurophysiology connections and ecological/sustainability connections.

Prize products are designed for everyday use in keeping with our sustainability and reef-connection theme for 2023. We moved away from the conference packs and paperwork. All is electronic and we hope that everyone can be ‘in the moment’ for the presentations and workshops.
Prize Products sourced: Products selected are crafted from natural wood for precision and are engraved which avoids the need for ink toxins. Products are also up cycled or recycled, all wooden material. Products are natural, will last for a long time and can be composted once they are no longer required.

IMPORTANT INFORMATION.

- **Please ensure you have nominated & paid for your plus ones for social events, & Green Island**
- **Please advise organising committee if you wish for the later boat transfer for Green Island.**
- **Hawaiian shirt day for Green Island.**
- **Please advise if you would like to book:**
    - **Green Island Optional prebooked Wunyami tour x 1 guide $39.00**- As part of a small group, discover the island through the eyes of your indigenous guide. Wunyami (Green Island’s traditional name) is connected to an ancient journey of two ancestorial story-time beings, who fought and formed the island and who still protect it today. This story is shared by the GuruGulu Gungganji people (Yarrabah) and the Gimuy Yidinji people (Cairns). Learn about cultural ceremonies and connection to the ancient seascape. Guides have special permission from their elders to share these stories with all who come on the tour.
- **If there are any minor modifications to the program, a release will be made available 09th August.**
- **Photos or anything you would like read out, stories etc are welcome for the Linda Welch tribute that will be held, along with some attending Cairns Hospital Queensland Health Staff.**

We look forward to a successful and interactive conference for 2023.
Thank you to all contributors, sponsors, trade delegates and attendees.
Holly, Alyssa & Queenie
(& Jasmine- maternity leave)

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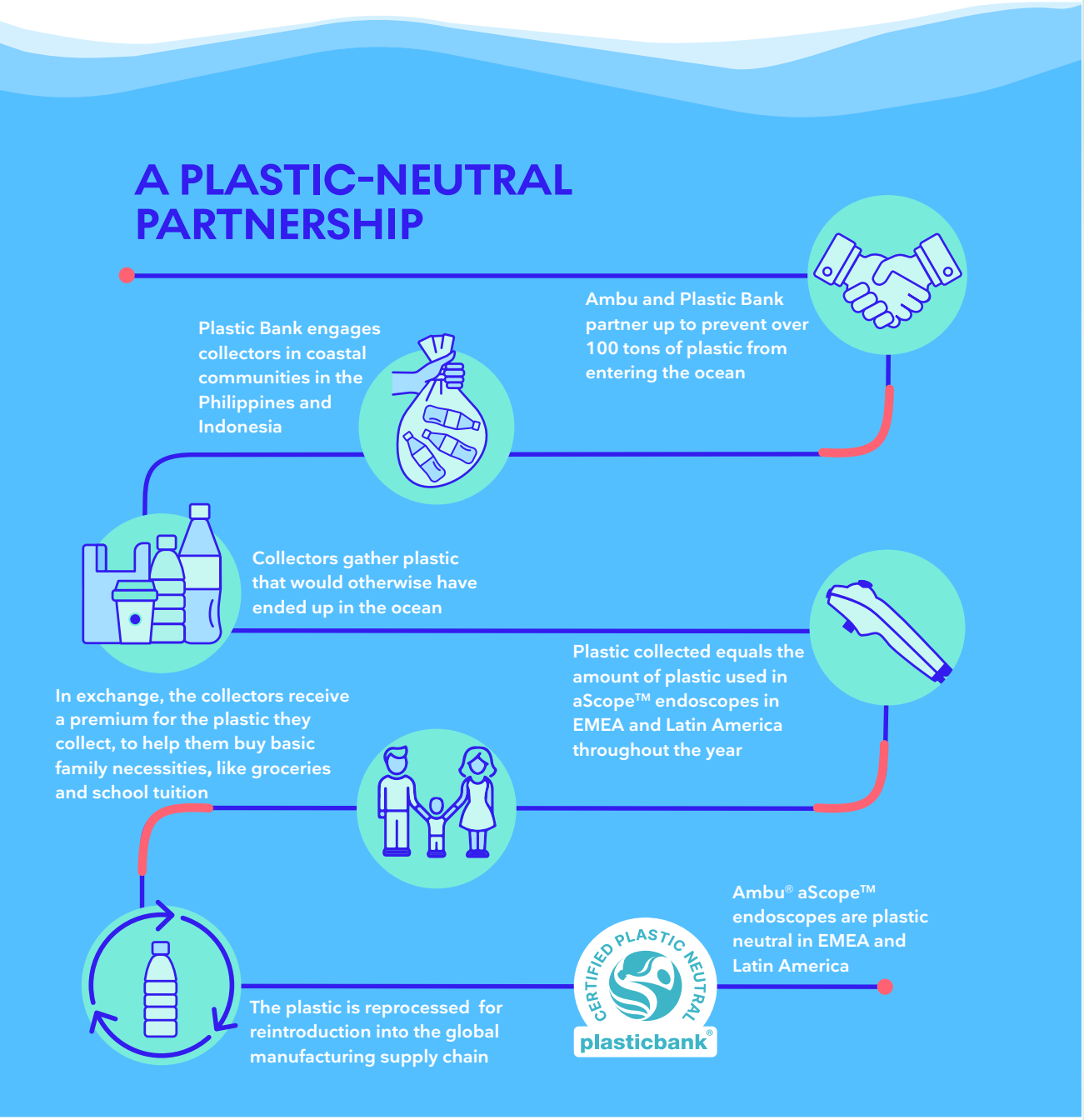

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