Section 1: Application Summary

Name of Product	**PrisMax**
Australian launch date	**March 2019**
Products used in (please select)	diagnosis prevention ✔ treatment ✔ management
Contact details	gareth_trickey@baxter.com

Your details

Name	**Gareth Trickey**	Position	**Communications Manager**
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Name of Company	**Baxter**	ABN	**43 000 392 781**

Executive Summary: [200 words max.] NB Executive Summary must be suitable for use in Award promotion

Designed with the input of more than 650 healthcare practitioners from more than 50 Intensive Care Units around the world including direct input from clinicians in Australia, PrisMax is Baxter's next-generation Continuous Renal Replacement Therapy device with Organ Support capabilities.

In Australia, about 150,000 patients are treated in the ICU every year with 5% - 6% requiring renal replacement therapy.

Simplicity, efficiency and accuracy are critical to supporting clinicians in this multi-disciplinary 24-hour care setting.

Designed with technical excellence to significantly improve the safety of treatment and lessen the burden on clinicians administering therapy for life-threatening illnesses and complications in the ICU, PrisMax features "innovative new software", "customized prescription settings", "increased dialyser compatibility" and an "intuitive touchscreen interface".

PrisMax also features "TherMax Blood Warmer" and "Auto-Effluent Drain System" - reducing treatment interventions and freeing up clinicians for more time for patient care.

Incorporating into a single device, PrisMax is designed to accommodate the diverse and evolving needs of intensive care.

Since launch in March 2019, PrisMax has become the preferred new Acute Therapy System for the ICU in Australia, with 10 PrisMax already installed in Australia at the time of submission, and orders to fill a further 5.

Section 2: Product Details

Describe the technology [300 words max.]

PrisMax incorporates fully re-designed hardware with intuitive new software to provide individualized and effective therapies for critically ill patients in the ICU.

PrisMax in combination with Baxter's specialty membrane technology, delivers a complete range of individualised extracorporeal (outside the body) therapies to remove waste products, excess fluids, to help manage patients with Acute Kidney Injury (AKI). Accommodating, individual patient needs, including lower body weight patients (>8kg), the flexible CRRT system is compatible with a wide range of dialyser membranes.

Customer-centric

Designed with input from 650 ICU healthcare professionals, combined with the results of a prospective, multi-centre international pilot study in six countries (including Australia at the Austin Hospital), PrisMax simplifies the complexities of delivering CRRT.

Featuring an "Auto-Effluent Drain System", PrisMax is transforming workflows in the ICU setting, reducing effluent bag changes for nurses by 60% compared to similar CRRT systems.

Incorporated into a single device for the ICU, PrisMax features a large intuitive touchscreen interface for simplified therapy management; therapy profiles that save customised prescription settings to facilitate and accelerate set up time; and a flexible software platform that accommodates remote patient monitoring systems and assists clinicians to deliver accurate treatments.

The "intuitive software" and "touchscreen interface" also lock to prevent accidental or unauthorised prescription changes for improved patient safety.

PrisMax also features "intelligent pump adjustments" for prescribed fluid removal targets – even when treatment interruptions occur.

The addition of the "TherMax blood warmer" adds a critical component for extracorporeal therapies using a bi-directional connection to help meet warming targets, automatically adjusting heating and to detect leaks.

Innovative Training System

Furthering Baxter's commitment to patient safety is the "Interactive On-device and Online Training Systems" of PrisMax that allows clinicians to run simulations without disposables.

PrisMax is a single device that brings together the input of ICU clinicians from Australia and around the world.

What health problem is the technology addressing and how does it address the problem? [300 words max.]

Acute Kidney Injury (AKI) is an increasingly common complication of acute illnesses in intensive care units and hospitals.

In 2012-2013, more than 130,000 hospitalisations were attributed to Acute Kidney Injury (as the principal and/or additional diagnosis).

An average of 4,670 deaths per year between 2000 and 2012 were attributed to AKI as the underlying or associated cause of death.

The use of Renal Replacement Therapy (RRT) forms a key component in the treatment for severe AKI and its use is required in up to 5%–6% of all critically ill patients in intensive care units (ICU) in ANZ (2).

Helping to manage patients with AKI, PrisMax - in combination with Baxter membrane technology - offers a complete range of extracorporeal (outside the body) therapies.

Delivering 99.8% of prescribed patient fluid removal in a clinical setting, PrisMax uses intelligent pump adjustments to helps administer accurate treatments – even when treatment interruptions occur.

Complex needs of ICU

The ICU is an increasingly multi-disciplinary area of the hospital requiring constant observation and specialised care. 12.8 million hours in ICU were reported for about 161,000 patients in 2017-2018 (3).

Designed to reduce nursing burden and simplify the complexities of delivering CRRT in this complex multi-therapy setting of the ICU, Prismax also features an "Auto-Effluent Drain System", reducing effluent bag changes by 60% compared to similar CRRT systems.

Potentially saving 30 minutes of nursing time and patient therapy downtime per patient per day, this innovation brings technical excellence to CRRT allowing clinicians in the complex ICU setting to focus on patient needs rather than interacting with the CRRT system.

The simplification and efficiency of PrisMax through a complete re-design of CRRT device hardware and the introduction of new software innovation is helping to deliver more individualised care and improved patient outcomes in the ICU.

What other products are currently available to address this issue and how does this technology differ from and/or improve on existing technology? [300 words max.]

In Australia, renal replacement therapy is considered the gold standard in treating AKI in the ICU. This therapy can only be delivered via a control unit that is capable of performing extracorporeal blood purification.

Renal replacement therapy devices available on the market today are designed to deliver safe and reliable performance of the therapy.

Currently available devices in Australia include InfoMed HF440, Nikkiso Aquarius, Fresenius Multifiltrate Pro and the market leading Baxter Prismaflex.

PrisMax

In comparison with the market leading Prismaflex platform, PrisMax outperformed in almost every category.

With the direct input of Australian clinicians at the Alfred Hospital ICU taking part a multi-centre international pilot study, PrisMax incorporates re-engineered hardware with new innovative software technology in a single device to make delivering therapy simpler and more efficient while also improving treatment accuracy in the ICU.

PrisMax advances the delivery of CRRT by maximising efficiency and accuracy through reducing the number of device interactions with "Auto-Effluent Drain System", improvements to filter life; reduced downtime, blood pump stops and bag changing times; and new smart malfunction alarms. PrisMax showed significantly improved values compared to historic Prismaflex data.

This frees up time for the end user to have a greater ability to attend to the patient or other tasks that are necessary in caring for the critically ill.

Furthermore, PrisMax is designed with a platform ready to incorporate organ support therapies beyond the kidney.

Having regard to the consumer's quality of life, does the product provide a balance between invasiveness and efficacy? [300 words max.]

AKI requiring CRRT is a highly complex procedure and delivery of this therapy can be challenging in the critical care environment.

In 2012-2013, the average length of stay for AKI hospitalisation was twice as long as the average length of stay overall (11.4 days compared to 5.6 days).

Reducing interaction and intervention, PrisMax features intuitive software to simplify the set-up and ease of delivery of Continuous Renal Replacement Therapy on chronic and critically ill patients.

The flexible system is compatible with a wide range of membranes to further address individual patient needs in the one device.

Designed to lower the risk of user-error in the complex setting of the ICU through improved task automation and simplified therapy management, PrisMax helps to improve the quality of patient care in the ICU.

During extracorporeal therapies, a patient's blood is required to be at a certain temperature prior to returning to the body. The "Thermax blood warmer" of PrisMax includes several advanced patient safety features to detect leaks and automatically adjust blood to the prescribed return blood temperature.

Reducing effluent bag changes by up to 60% compared to similar CRRT systems, the PrisMax "Auto-Effluent Drain System", combined with saved customised prescription settings deliver further automation and helps to maximise the quality of one-on-one care.

The interactive "On-device and On-line Training" also assists in ICUs where there is high turnover or a large number of staff that need to be trained in acute and critical care.

Include scientific evidence to support the claims. This may include published data, unpublished scientific data, results of clinical trials and/or patient feedback. Photographs may be submitted. Product samples will not be accepted.

Publications and support material

Broman et al, The Novel PrisMax Continuous Renal Replacement Therapy System in a Multinational, Multicentre Pilot Setting. *Blood Purif 2018;46:220–227*

Bell et al, Comparison of the Accuracy of the Novel PrisMax Continuous Renal Replacement Therapy System to the Classic Prismaflex System. *Blood Purif 2018; 47(1-3):1-5*

References

1. Australian Institute of Health and Welfare 2015. Acute kidney injury in Australia: a first national snapshot. Cat. no. PHE 190. Canberra: AIHW.
2. Fealy et al, Continuous renal replacement therapy: current practice in Australian and New Zealand intensive care units. *Crit Care Resusc 2015; 17: 83–91*
3. Admitted patient care 2017-2018 – Australian Institute of Health and Welfare, p.66.

Section 3: Declaration

I certify that the information provided in this application is accurate and that the company accepts the Rules of the Award. Representative/s of the company will participate in promotional activities relating to the Award.

Name: _____ *Position:* _____

Signature of the CEO/Authorised Representative: _____

*Date:*_____/_____/_____

Please send your application to MTAA Secretariat – Kerrin Rennie Award

Kerrin Rennie Award
2019 Application

CLOSING DATE: **26 JULY 2019**