



Joaquim Diniz

1
00:00:01,500 --> 00:00:05,704
>> [Music] For generations,
we dreamed about a place

2
00:00:05,704 --> 00:00:08,040
to live and work in space.

3
00:00:08,040 --> 00:00:12,645
A place where life up there
would benefit life down here.

4
00:00:12,645 --> 00:00:15,781
Today, that dream has come true.

5
00:00:15,781 --> 00:00:19,819
Research on the International
Space Station improves lives all

6
00:00:19,819 --> 00:00:21,020
over the world.

7
00:00:21,020 --> 00:00:25,191
The Station's benefits
for humanity grow everyday

8
00:00:25,191 --> 00:00:30,529
and they can be told by the
lives that have been changed.

9
00:00:30,529 --> 00:00:38,037
[Music]

10
00:00:38,037 --> 00:00:38,971
>> [Foreign Language Spoken].

11
00:00:38,971 --> 00:00:42,608
>> Minas Gerais is
a large state.

12

00:00:42,608 --> 00:00:46,345

Our territory is about the
size of France and we consist

13

00:00:46,345 --> 00:00:50,182

of 853 units and municipalities.

14

00:00:50,182 --> 00:00:53,486

There are large distances
between our communities

15

00:00:53,486 --> 00:00:57,723

and many very isolated
rural communities.

16

00:00:57,723 --> 00:00:58,991

>> [Foreign Language Spoken]

17

00:00:58,991 --> 00:01:04,029

>> We are using new technology
that impacts the quality

18

00:01:04,029 --> 00:01:06,799

of prenatal care and
the diagnostic capacity

19

00:01:06,799 --> 00:01:08,167

of the primary care doctor

20

00:01:08,167 --> 00:01:11,504

in the situations involving
distant isolated communities.

21

00:01:11,504 --> 00:01:18,043

[Music]

22

00:01:18,043 --> 00:01:21,814

>> Providing medical care for
people in remote locations

23

00:01:21,814 --> 00:01:23,883
like distant rural communities

24

00:01:23,883 --> 00:01:26,352
or the International Space
Station can be difficult

25

00:01:26,352 --> 00:01:29,421
because trained medical
personnel are not

26

00:01:29,421 --> 00:01:30,489
always available.

27

00:01:30,489 --> 00:01:34,827
NASA research teams
developed techniques

28

00:01:34,827 --> 00:01:37,830
that enable astronauts
aboard the Space Station

29

00:01:37,830 --> 00:01:42,234
with minimal training to operate
an ultrasound device using a

30

00:01:42,234 --> 00:01:45,304
simple printed guide.

31

00:01:45,304 --> 00:01:48,674
The ultrasound images are
transmitted in real time

32

00:01:48,674 --> 00:01:52,111
to a doctor back on earth who
can make medical decisions

33

00:01:52,111 --> 00:01:54,113

without actually being
aboard the Station.

34
00:01:54,113 --> 00:01:58,317
These same techniques
have been adapted for use

35
00:01:58,317 --> 00:02:01,554
with portable ultrasound
devices in communities

36
00:02:01,554 --> 00:02:04,490
where expert medical care
is not always available.

37
00:02:04,490 --> 00:02:07,993
[Music]

38
00:02:07,993 --> 00:02:08,827
>> [Foreign language spoken].

39
00:02:08,827 --> 00:02:12,631
>> My name is Joaquim de Diniz.

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00:02:12,631 --> 00:02:16,101
I'm a doctor in the
town of Manga.

41
00:02:16,101 --> 00:02:19,438
In Manga people live
with a particularity

42
00:02:19,438 --> 00:02:24,910
and that is isolation.

43
00:02:24,910 --> 00:02:25,911
>> [Foreign language spoken].

44
00:02:25,911 --> 00:02:27,479

>> We have a geographical barrier

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00:02:27,479 --> 00:02:31,183

that is the Sao Francisco River which is both a blessing

46

00:02:31,183 --> 00:02:35,921

for the region but it also isolates us.

47

00:02:35,921 --> 00:02:38,057

>> [Foreign language spoken].

48

00:02:38,057 --> 00:02:40,726

>> We live in a region where financial resources are few.

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00:02:40,726 --> 00:02:44,096

People do not have a lot of work but they are honest,

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00:02:44,096 --> 00:02:47,766

good people who do not have much opportunity.

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00:02:47,766 --> 00:02:50,703

So there are many needy people who need these resources

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00:02:50,703 --> 00:02:52,605

and rely only on this institution

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00:02:52,605 --> 00:02:53,572

to provide assistance.

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00:02:53,572 --> 00:02:54,940

>> [Foreign language spoken].

55

00:02:54,940 --> 00:03:00,479

>> This is a technology that helps us solve many problems.

56

00:03:00,479 --> 00:03:05,985

[Music]

57

00:03:05,985 --> 00:03:10,022

>> [Foreign language spoken].

58

00:03:10,022 --> 00:03:12,791

>> There was a case of a patient who came to the hospital

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00:03:12,791 --> 00:03:14,827

with severe respiratory failure

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00:03:14,827 --> 00:03:16,662

and the people realized she would die

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00:03:16,662 --> 00:03:18,397

in just 20 to 30 minutes.

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00:03:18,397 --> 00:03:23,235

We ran and we talked with Dr. Prazelli who was training us

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00:03:23,235 --> 00:03:24,770

to use the ultrasound.

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00:03:24,770 --> 00:03:26,672

He came and applied the ultrasound

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00:03:26,672 --> 00:03:29,108

and discovered large amounts of fluid

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00:03:29,108 --> 00:03:31,243

around her lungs and heart.

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00:03:31,243 --> 00:03:33,679

We performed a procedure
and drained a lot of fluid.

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00:03:33,679 --> 00:03:38,751

In 20 minutes, 10 minutes the
woman immediately experienced an

69

00:03:38,751 --> 00:03:41,887

improvement and in half an
hour was already walking.

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00:03:41,887 --> 00:03:44,123

It was like a miracle.

71

00:03:44,123 --> 00:03:46,725

Arise and walk.

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00:03:46,725 --> 00:03:48,294

She was dying in front of us

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00:03:48,294 --> 00:03:53,032

without people knowing
what was happening.

74

00:03:53,032 --> 00:03:55,534

This ultrasound was instrumental

75

00:03:55,534 --> 00:03:58,537

in saving the life
of that patient.